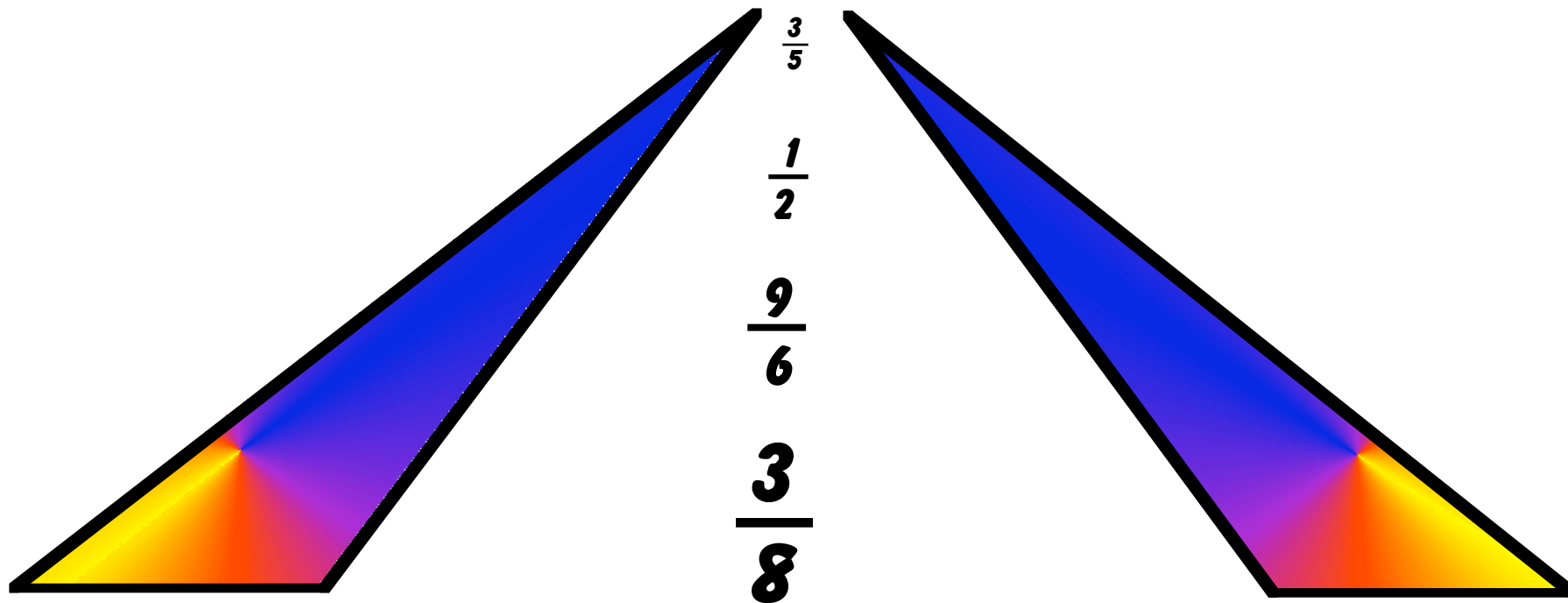


# **FRACTION ALLEY**

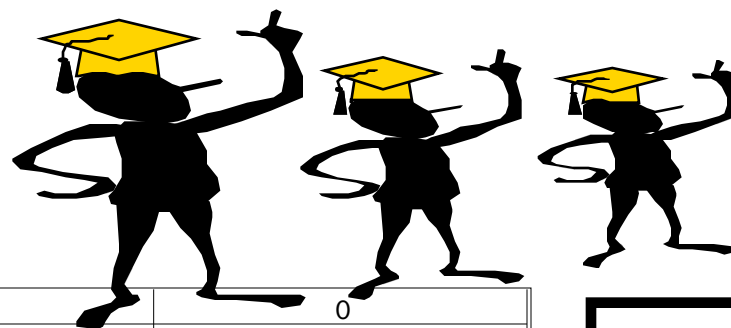


**QUESTION AND ANSWER LIBRARIES:**  
**1) MATH CONCEPTS • 2) COMPUTATION**  
**3) ALGEBRA • 4) GEOMETRY**



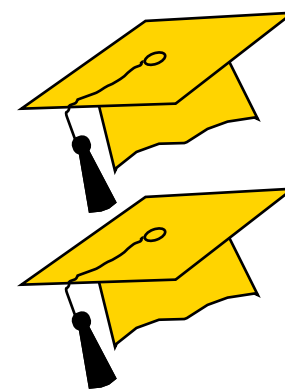
# FRACTION ALLEY

## MATH CONCEPTS BLOCK



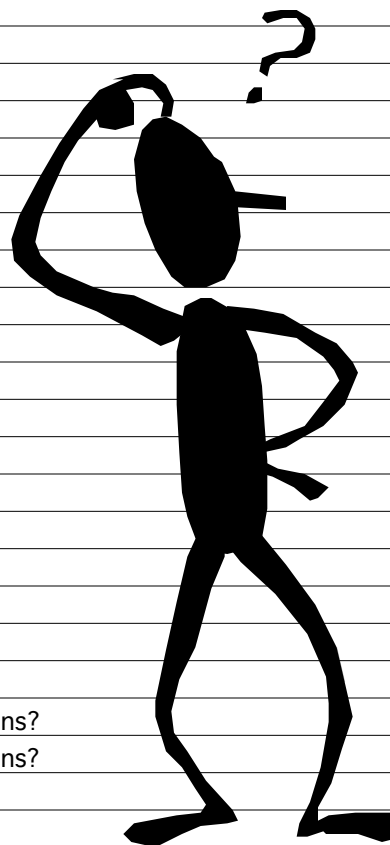
0.125	What is the least valued whole number?	0
0.25	What is the greatest valued negative integer?	- 1
0.375	A rational number is a number that can be written as a ratio of ...	two integers
0.5	Every rational number can be written as these decimal types.	terminating or repeating
0.625	In decimal form, an irrational number never repeats and never ...	ends or terminates
0.75	Together, the whole numbers and their opposites make this set.	Integers
0.875	Together, the rational and irrational numbers make this set.	Real Numbers
1	What do we call the set of whole numbers that are evenly divisible by 2?	Even Numbers
1.125	What do we call the set of whole numbers that are not evenly divisible by 2?	Odd Numbers
1.25	Find the sum of the first five whole numbers.	10
1.375	Find the sum of the first four prime numbers.	17
1.5	Find the sum of the first six whole numbers.	15
1.625	Find the sum of the prime numbers between 10 and 20.	60
1.75	The sum of two even whole numbers is always this kind of whole number.	even whole number
1.875	The sum of two odd whole numbers is always this kind of whole number.	even whole number
2	A product is an answer to this kind of problem.	multiplication
2.125	A sum is an answer to this kind of problem.	addition
2.25	A difference is the answer to this kind of problem.	subtraction
2.375	A quotient is the answer to this kind of problem.	division
2.5	The product of two odd whole numbers is always this kind of whole number.	odd whole number
2.625	The product of two even whole numbers is always this kind of whole number.	even whole number
2.75	How many whole number factors does 20 have?	6
2.875	Find the sum of the whole number factors of 18.	39
3	Is 51 prime or composite?	composite
3.125	Is 63 prime or composite?	composite
3.25	Is 73 prime or composite?	prime
3.375	Find the sum of the first three positive multiples of four.	24
3.5	Find the sum of the first three positive multiples of five.	30
3.625	$12 + 9 = 9 + 12$ is an example of which property?	commutative
3.75	What is the identity element for addition?	0

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3.875	What is the identity element for multiplication?	1
4	What is the additive inverse of 25?	-25
4.125	What is the multiplicative inverse of 5?	$\frac{1}{5}$
4.25	Find 20% of 60.	12
4.375	Find 10% of 240.	24
4.5	Find 250% of 30.	75
4.625	Find 150% of 60.	90
4.75	Find 250% of 12.	30
4.875	Find 225% of 12.	27
5	13 is 50% of what?	26
5.125	20 is 25% of what?	80
5.25	32 is what percent of 64?	50 percent
5.375	11 is what percent of 44?	25 percent
5.5	How many feet are in 36 inches?	3 feet
5.625	How many inches are in 4 feet?	48 inches
5.75	How many yards are in 15 feet?	5 yards
5.875	How many feet are in 10 yards?	30 feet
6	How many feet are in 1 mile?	5280 feet
6.125	If 1 pound = 16 ounces, how many ounces are in 4 pounds?	64 ounces
6.25	If 1 pound = 16 ounces, how many ounces are in 2 pounds?	32 ounces
6.375	If 1 pound = 16 ounces, how many pounds are in 32 ounces?	2 pounds
6.5	If 1 tablespoon = 3 teaspoons, how many teaspoons are in 5 tablespoons?	15 teaspoons
6.625	If 1 tablespoon = 3 teaspoons, how many tablespoons are in 9 teaspoons?	3 tablespoons
6.75	How many hours are in 2 days?	48 hours
6.875	How many seconds are in five minutes?	300 seconds
7	How many minutes are in two and one-half hours?	150 minutes
7.125	If 1 meter = 100 centimeters, how many centimeters are in $2\frac{1}{2}$ meters?	250 centimeters
7.25	If 1 centimeter = 10 millimeters, how many millimeters are in 25 centimeters?	250 millimeters
7.375	If 1 kilometer = 1000 meters, how many meters are in 5 kilometers?	5000 meters
7.5	If 1 gallon = 4 quarts, then how many quarts are in $4\frac{1}{2}$ gallons?	18 quarts
7.625	If 1 gallon = 4 quarts, then how many gallons are in 40 quarts?	10 gallons
7.75	A right angle has how many degrees?	90 degrees
7.875	Perpendicular lines form these kinds of angles.	Right angles
8	What is the perimeter of a square with side length 12 centimeters?	48 centimeters
8.125	What is the area of a rectangle with length 11 feet and width 6 feet?	66 square feet



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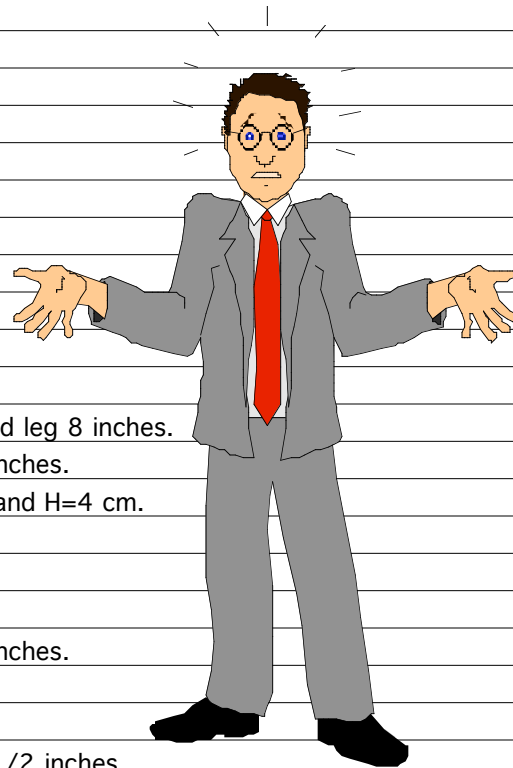
8.25	Reduce $20/30$ to lowest terms.	$2/3$
8.375	Reduce $5/20$ to lowest terms.	$1/4$
8.5	Subtract $1/8$ from 5.	$4 \frac{7}{8}$
8.625	Subtract $1/16$ from 3.	$2 \frac{15}{16}$
8.75	What is one half of $4/5$ ?	$2/5$
8.875	What is one half of $1/2$ ?	$1/4$
9	What is $1/2$ of 50%?	25%
9.125	Add $1/4 + 1/2$ .	$3/4$
9.25	Add $1/2 + 3/4$ .	$1 \frac{1}{4}$
9.375	Divide: 6 by $1/2$ . (How many halves are in six?)	12
9.5	Divide: 2 by $1/4$ . (How many fourths are in two?)	8
9.625	True or False: If a fraction is reduced to lower terms, the new fraction is less than the original fraction.	FALSE
9.75	True or False: Every fraction has a value less than 1.	FALSE
9.875	Change $12/5$ to a mixed number.	$2 \frac{2}{5}$
10	Change $9/4$ to a mixed number.	$2 \frac{1}{4}$
10.125	Change $20/9$ to a mixed number.	$2 \frac{2}{9}$
10.25	Which of the fractions $1/2$ , $3/5$ , $3/8$ , or $5/9$ converts to a repeating decimal?	$5/9$
10.375	Which of the fractions $1/4$ , $3/11$ , $7/10$ , or $1/25$ converts to a repeating decimal?	$3/11$
10.5	Which of the fractions $2/5$ , $1/6$ , $1/8$ , or $9/10$ converts to a repeating decimal?	$1/6$
10.625	Find the mean of 4, 8, and 6.	6
10.75	Find the range of the first 5 prime numbers.	9
10.875	Find the median of the proper factors of 24.	5
11	Find the mode of the prime numbers in the prime factorization of 72.	2
11.125	Find the mean of 20, 18, and 7.	15
11.25	Find the range of the proper factors of 18.	7
11.375	Find the median of the proper factors of 30.	5.5
11.5	Find the mode of the prime numbers in the prime factorization of 90.	3
11.625	Reduce $10/25$ to lowest terms.	$2/5$
11.75	Add $1/2$ and $1/4$ .	$3/4$
11.875	What is $2 \frac{1}{2}$ divided by $1/2$ ?	5
12	What is the product of 3 and $2 \frac{1}{2}$ ?	$7 \frac{1}{2}$
12.125	Which has the least value? $1/3$ or $2/5$ ?	$1/3$
12.25	Which has the greater value: 20% or $3/20$ ?	20%
12.375	Find the sum of the squares of 3 and 2.	13
12.5	Find the greatest common factor between 20 and 32.	4

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12.625	Find the area of a square with side length 11 inches.	121 sq in
12.75	Find the value of $A + B$ if $A = 22$ and $B = 11$ .	33
12.875	Find the perimeter of a rhombus with side length = 4.5 inches.	18 inches
13	Find the value of $2A + B$ if $A = 12$ and $B = 5$ .	29
13.125	What kind of triangle has an angle that is greater than 90 degrees?	obtuse triangle
13.25	True or False: An equilateral triangle is also equiangular.	TRUE
13.375	Solve the equation: $x + 21 = 40$ for $x$ .	$x = 19$
13.5	Solve the equation: $4x = 48$ for $x$ .	$x = 12$
13.625	True or False: The diagonals of a rectangle are always congruent.	TRUE
13.75	Find the value of $2x + y$ if $x = 11.2$ and $y = .6$ .	23
13.875	Find the value of $2x + y$ if $x = 6.5$ and $y = 4$ .	17
14	Find the value of $2x + y$ if $x = 3.7$ and $y = .6$ .	8
14.125	Find the value of $3x + y$ if $x = 10.2$ and $y = .4$ .	31
14.25	Find the area of a triangle with base 20 cm and height 14 cm.	140 sq cm
14.375	Find the perimeter of a triangle with side lengths 10, 8, and 8 inches.	26 inches
14.5	Find the perimeter of a regular pentagon if one side length is 14 inches.	70 inches
14.625	What theorem states the sum of squares of the legs = square of hypotenuse?	Pythagorean Thm
14.75	What is the name of the longest side in a right triangle?	hypotenuse
14.875	Find the perimeter of a regular hexagon if one side length is 11 millimeters.	66 millimeters
15	What do we call a triangle that has all 3 sides congruent?	equilateral
15.125	True or False: The angles of an equilateral triangle each measure 60 degrees.	TRUE
15.25	True or False: A right triangle can have at least one obtuse angle.	FALSE
15.375	True or False: The base angles of an isosceles triangle are always congruent.	TRUE
15.5	True or False: An isosceles triangle has at least 2 sides congruent.	TRUE
15.625	In a right triangle, if one acute angle measures 25 degrees, then the other acute angle measures ...	65 degrees
15.75	What is the square of 9?	81
15.875	What is the square of 8?	64
16	What is the square of 11?	121
16.125	What is the square of 12?	144
16.25	What is the square root of 81?	9
16.375	What is the square root of 25?	5
16.5	Find the sum of the squares of 3 and 4.	25
16.625	Find the positive difference of the squares of 3 and 4.	7
16.75	Find the product of the squares of 3 and 2.	36
16.875	True or False: Opposite angles of a parallelogram are congruent.	TRUE

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17	Find the sum of -2, -4, and -6.	-12
17.125	Combine -14 and 11.	-3
17.25	Find the product of -5 and -6.	30
17.375	Find the quotient of -20 and -5.	4
17.5	Find the perimeter of a square with side length $4\frac{1}{2}$ .	18
17.625	An isosceles trapezoid has this many pairs of congruent sides.	1
17.75	Find the area of a triangle with base 12 cm and height 8 cm.	48 sq cm
17.875	Find the area of a rectangle with L= 10 cm and W= $1\frac{1}{2}$ cm.	15 sq cm
18	Find the area of a square with side length = $2\frac{1}{2}$ inches.	$6\frac{1}{4}$ sq in
18.125	Find the volume of a cube with side length 3 inches.	27 cubic inches
18.25	Find the surface area of a cube with side length 2 inches.	24 sq inches
18.375	Find the perimeter of an isosceles triangle with base 12 inches and leg 8 inches.	28 inches
18.5	Find the perimeter of an equilateral triangle with side length 11 inches.	33 inches
18.625	Find the volume of a rectangular solid with L= 10 cm, W= 5 cm, and H=4 cm.	200 cubic cm
18.75	Find the area of a trapezoid with bases 10 and 8 and height 4.	36 sq units
18.875	Find the volume of a cube with side length 1 inch.	1 cubic inch
19	Combine -10, 9, and -9.	-10
19.125	Find the perimeter of an equilateral triangle with side length 18 inches.	54 inches
19.25	Find the product of -1, -3, and 6.	18
19.375	Find the volume of a cube with side length one inch.	1 cubic inch
19.5	Find the perimeter of an equilateral triangle with side length $6\frac{1}{2}$ inches.	$19\frac{1}{2}$ inches
19.625	Find the perimeter of a parallelogram with side lengths 11 inches and 6 inches.	34 inches
19.75	State the formula for the perimeter of a rectangle with length L and width W.	$p= 2L + 2W$
19.875	Find the volume of a rectangular solid with L= 4 cm, W= 4 cm, and H=2 cm.	32 cubic cm
20	State the formula for area of a triangle with base b and height h	$\frac{1}{2} bh$
20.125	What do we call a polygon with eight sides?	octagon
20.25	How many sides does a decagon have?	10
20.375	If a rectangle is revolved around one of its sides, what figure is formed?	cylinder
20.5	If a right triangle is revolved around one of its legs, what figure is formed?	cone
20.625	If a semicircle is rotated, in space, 360 degrees around its diameter, what figure is formed?	sphere
20.75	Find the surface area of a cube with side length 3 cm.	54 sq cm
20.875	Find the median of the ten digits zero through nine.	4.5
21	Find the perimeter of a square with side length 4.5 inches	18 inches
21.125	True or False: The numbers 4 and 5 belong to the set of integers.	TRUE
21.25	What do we call a polygon with six sides?	hexagon



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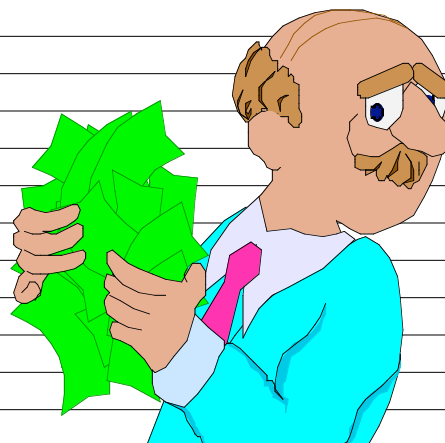
21.375	True or False: The sum of 'n' numbers divided by n is the average of the numbers.	TRUE
21.5	True or False: The mode of a set of numbers is the number that appears in the set most frequently.	TRUE
21.625	True or False: The range of a set of numbers is the difference between the greatest and least values.	TRUE
21.75	True or False: The median of a set of numbers is always one of the numbers in the set.	FALSE
21.875	True or False: The mean of a set of numbers is always one of the numbers in the set.	FALSE
22	True or False: The mode of a set of numbers is always one of the numbers in the set.	TRUE
22.125	True or False: The range of a set of numbers is always one of the numbers in the set.	FALSE
22.25	Find the sum of the digits of 5,972.	23
22.375	Find the sum of the digits of 3,006.	9
22.5	Find the product of the digits of 5,909.	0
22.625	Find the product of the digits of 11,231.	6
22.75	An acute triangle has this many acute angles.	3
22.875	True or False: A triangle cannot be isosceles and right at the same time.	FALSE
23	True or False: Each angle of an equilateral triangle has measure 60 degrees.	TRUE
23.125	The number 40 has this many whole number factors.	8
23.25	The number 49 has this many whole number factors.	3
23.375	A heptagon has this many sides.	7
23.5	A quadrilateral has this many sides.	4
23.625	A pentagon has this many sides.	5
23.75	A hexagon has this many sides.	6
23.875	An octagon has this many sides.	8
24	A decagon has this many sides.	10
24.125	In a polygon, a line segment whose endpoints are two non-consecutive vertices is a ...	diagonal
24.25	True or False: The diagonals of a regular polygon are congruent.	TRUE
24.375	Find the sum of the first five prime numbers.	28
24.5	Find the sum of the first five whole numbers.	10
24.625	Find the sum of the prime numbers between 30 and 40.	68
24.75	The sum of two even whole numbers is always this kind of whole number.	even whole number
24.875	The sum of two odd whole numbers is always this kind of whole number.	even whole number
25	A product is an answer to this kind of problem.	multiplication
25.125	A sum is an answer to this kind of problem.	addition
25.25	A difference is the answer to this kind of problem.	subtraction
25.375	A quotient is the answer to this kind of problem.	division
25.5	The product of two odd whole numbers is always this kind of whole number.	odd whole number
25.625	The product of two even whole numbers is always this kind of whole number.	even whole number





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25.75	Find 200% of 60.	120
25.875	Find 300% of 20.	60
26	Find 150% of 80.	120
26.125	Find 250% of 20.	50
26.25	Find 125% of 40.	50
26.375	Find 50 less 10%.	45
26.5	Find 40 less 50%.	20
26.625	Find 10% more than 50.	55
26.75	Find 20% more than 30.	36
26.875	Find 25% more than 60.	75
27	How many faces are on a cube?	6
27.125	How many faces are on a square based pyramid?	5
27.25	How many vertices are on a cube?	8
27.375	How many vertices are on a rectangular solid?	8
27.5	How many vertices are on a square based pyramid?	5
27.625	Starting left of zero, find the sum of the first four negative integers	-10
27.75	True or False: An equilateral triangle can be used solely to tessellate the plane.	TRUE
27.875	True or False: A pentagon can be used solely to tessellate the plane.	FALSE
28	True or False: A square can be used solely to tessellate the plane.	TRUE
28.125	True or False: A regular octagon can be used solely to tessellate the plane.	FALSE
28.25	True or False: A regular hexagon can be used solely to tessellate the plane.	TRUE
28.375	Reduce $25/30$ to lowest terms.	$5/6$
28.5	Reduce $14/21$ to lowest terms.	$2/3$
28.625	Subtract $3/8$ from 7.	$6 \frac{5}{8}$
28.75	Subtract $1/16$ from 4.	$3 \frac{15}{16}$
28.875	What is one half of $8/11$ ?	$4/11$
29	What is one half of $1/2$ ?	$1/4$
29.125	What is $1/2$ of 82%?	41%
29.25	Add $3/4 + 3/4$ and simplify your answer.	$1 \frac{1}{2}$
29.375	Add $1/2 + 1/4 + 1/2$ .	$1 \frac{1}{4}$
29.5	Divide: 9 by $1/2$ . (How many halves are in nine?)	18
29.625	Divide: 6 by $1/4$ . (How many fourths are in six?)	24
29.75	True or False: If a fraction is reduced to lower terms, the new fraction is less than the original fraction.	FALSE
29.875	True or False: $7/4$ is an example of an improper fraction.	TRUE
30	Change $12/7$ to a mixed number.	$1 \frac{5}{7}$



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30.125	How many degrees are in a circle?	360
30.25	What name is associated with the distance from the center of the circle to the circle?	radius
30.375	What name is associated with the distance from one side of the circle to the other, through the center?	diameter
30.5	Find the area of a circle with radius 2. Use the $\pi$ for pi.	$4\pi$
30.625	Find the area of a circle with radius 3. Use $\pi$ for pi.	$9\pi$
30.75	Find the circumference of a circle with radius 2. Use the $\pi$ for pi.	$4\pi$
30.875	Find the circumference of a circle with radius 5. Use the $\pi$ for pi.	$10\pi$
31	Find the area of a circle with radius 6. Use the $\pi$ for pi.	$36\pi$
31.125	Find the area of a circle with radius 9. Use $\pi$ for pi.	$81\pi$
31.25	Find the circumference of a circle with radius 12. Use the $\pi$ for pi.	$24\pi$
31.375	Find the circumference of a circle with radius 4.5. Use the $\pi$ for pi.	$9\pi$
31.5	Round 469 to the nearest hundred.	500
31.625	Round 3,499 to the nearest thousand.	3000
31.75	Round 24,089 to the nearest hundred.	24100
31.875	Round 56,856 to the nearest hundred.	56900
32	Round 24.099 to the nearest tenth.	24.1
32.125	Round 99.029 to the nearest hundredth.	99.03
32.25	How many diameters are associated with one circle?	infinite
32.375	How many centers are in a circle?	one
32.5	How many degrees are associated with one circle?	360
32.625	How many degrees are in a semicircle?	180
32.75	What is the least valued whole number?	0
32.875	What is the greatest valued negative integer?	-1
33	A rational number is a number that can be written as a ratio of ...	two integers
33.125	Every rational number can be written as these decimal types.	terminating or repeating
33.25	In decimal form, an irrational number never repeats and never ...	ends or terminates
33.375	Together, the whole numbers and their opposites make this set.	Integers
33.5	Together, the rational and irrational numbers make this set.	Real Numbers
33.625	What do we call the set of whole numbers that are evenly divisible by 2?	Even Numbers
33.75	What do we call the set of whole numbers that are not evenly divisible by 2?	Odd Numbers
33.875	True or False: All the multiples of 18 are even numbers.	TRUE
34	Division by zero in mathematics is always ...	undefined

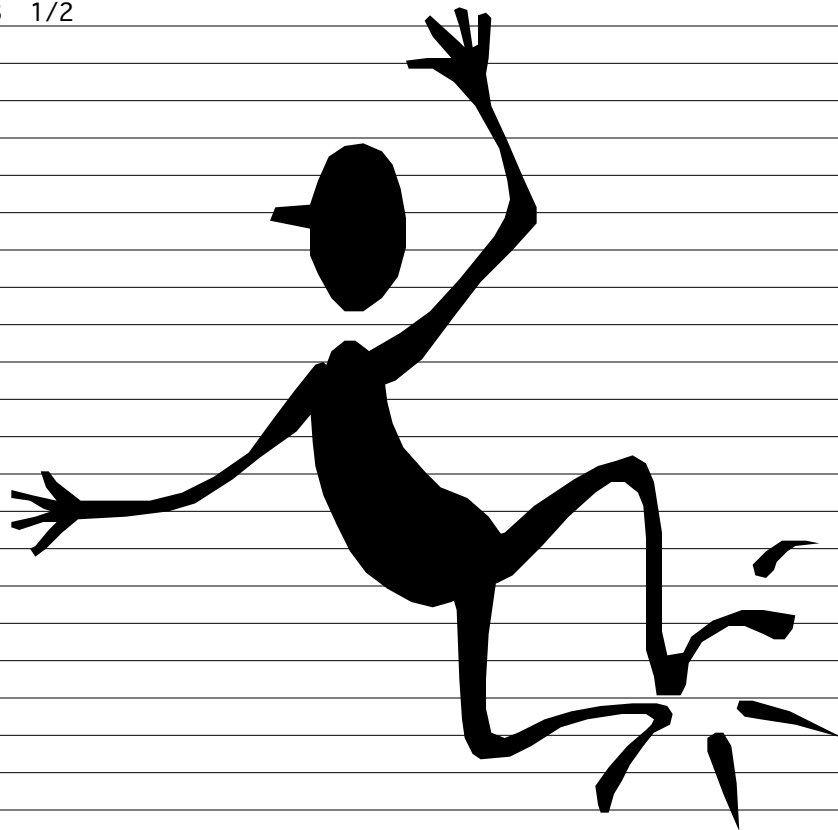


# FRACTION ALLEY

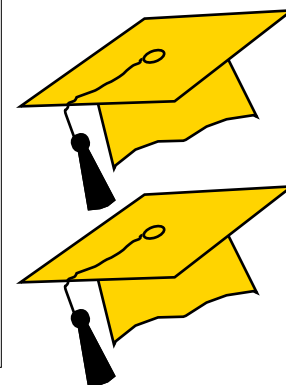
## COMPUTATION BLOCK



0.125	$1/2 + 3/4$	$1 \frac{1}{4}$
0.25	$6/2 + 1/2 + 3 \frac{1}{2}$	7
0.375	$5/5 + 6/5$	$2 \frac{1}{5}$
0.5	$3/4 + 4/4$	$1 \frac{3}{4}$
0.625	$5/2 + 3/1$	$5 \frac{1}{2}$
0.75	$7/4 + 1/1$	$2 \frac{3}{4}$
0.875	$1/4 - 1/4$	0
1	$7/4 + 2/4$	$2 \frac{1}{4}$
1.125	$1/2 + 1/4$	$3/4$
1.25	$3/4 + 1/2$	$1 \frac{1}{4}$
1.375	$9/4 + 1/4$	$2 \frac{1}{2}$
1.5	$9/2 + 2/2$	$5 \frac{1}{2}$
1.625	$2/4 + 3/4$	$1 \frac{1}{4}$
1.75	$9/4 - 3/4$	$1 \frac{1}{2}$
1.875	$1/4 + 4/4$	$1 \frac{1}{4}$
2	$1/4 + 7/4$	2
2.125	$8/1 + 3/2$	$9 \frac{1}{2}$
2.25	$1/4 + 8/4$	$2 \frac{1}{4}$
2.375	$1/4 + 9/4$	$2 \frac{1}{2}$
2.5	$21 + 29 + 43$	93
2.625	$25 + 11 + 25$	61
2.75	$24 \times 5$	120
2.875	$46 \times 3$	138
3	$84 - 16$	68
3.125	$110 - 38$	72
3.25	135 divided by 5	27
3.375	288 divided by 4	72
3.5	$3/2 - 2/2$	$1/2$
3.625	$6/4 - 1/4$	$1 \frac{1}{4}$
3.75	$3/4 + 5/4$	2



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# FRACTION ALLEY COMPUTATION BLOCK

3.875	$7/4 + 10/4$	4 $1/4$
4	$9/5 + 2/1$	3 $4/5$
4.125	$6/4 + 1/4$	1 $3/4$
4.25	$3/4 + 7/4$	2 $1/2$
4.375	$25 + 75 + 35$	135
4.5	$1/1 - 3/4$	$1/4$
4.625	$2/4 + 6/4$	2
4.75	$3/4 + 2/4$	1 $1/4$
4.875	$2/5 + 8/5$	2
5	$1/3 + 5/3$	2
5.125	$9/7 + 19/7$	4
5.25	$11/5 + 4/5$	3
5.375	$6/4 - 6/4$	0
5.5	$2/1 - 2/4$	1 $1/2$
5.625	$1/3 + 1/2$	$5/6$
5.75	655 divided by 5	131
5.875	455 divided by 5	91
6	$23 \times 20$	460
6.125	$52 \times 12$	624
6.25	$96 + 84$	180
6.375	$295 + 85$	380
6.5	$100 - 51$	49
6.625	$100 - 23$	77
6.75	$100 - 51$	49
6.875	$3/4 + 1/4$	1
7	$200 \div 25$	8
7.125	$7/8 - 7/8$	0
7.25	$31 \times 4$	124
7.375	$1/2 + 1/8$	$5/8$
7.5	$20 - 5.5$	14.5
7.625	$16.7 + 6.9$	23.6
7.75	$2.5 \times 4$	10
7.875	$8.5 - 1 \frac{1}{2}$	7
8	$4.4 \times 5$	22
8.125	$6/4 + 9/4$	3 $3/4$

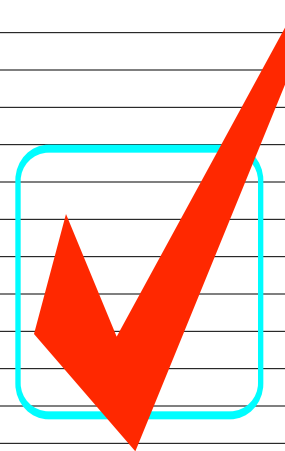


# FRACTION ALLEY COMPUTATION BLOCK

8.25	Find 50% of 120	60
8.375	$6/4 + 1/1$	$2 \frac{1}{2}$
8.5	$4/2 + 3/8$	$2 \frac{3}{8}$
8.625	$2/2 + 7/2$	$4 \frac{1}{2}$
8.75	$5/4 + 4/4$	$2 \frac{1}{4}$
8.875	$1/4 + 1/8$	$\frac{3}{8}$
9	$3/4 + 7/1$	$7 \frac{3}{4}$
9.125	$45 \times 5$	225
9.25	$8/4 + 4/4$	3
9.375	$1/8 + 1/2$	$\frac{5}{8}$
9.5	$6/4 + 7/4$	$3 \frac{1}{4}$
9.625	$2/2 + 4/8$	$1 \frac{1}{2}$
9.75	$2/2 + 6/2$	4
9.875	$45 + 95$	140
10	$90 - 47$	43
10.125	332 divided by 8	$41 \frac{1}{2}$
10.25	$17 + 27$	44
10.375	$6.5 \times 3$	19.5
10.5	$400 \div 8$	50
10.625	$3.5 + 3.5 + 1$	8
10.75	$1/8 + 6/2$	$3 \frac{1}{8}$
10.875	$8/4 + 1/4$	$2 \frac{1}{4}$
11	Find 50% of 90	45
11.125	$6/8 + 5/8$	$1 \frac{3}{8}$
11.25	$2 - 5/8$	$1 \frac{3}{8}$
11.375	$2/4 + 1/2$	1
11.5	Find 25% of 120	30
11.625	Find 150% of 60	90
11.75	$.75 + 4/4$	1.75
11.875	$5/2 + 10/2$	$7 \frac{1}{2}$
12	$9/4 + 2/4$	$2 \frac{3}{4}$
12.125	Find $1/4$ of 8	2
12.25	Find $5/4$ of 32	40
12.375	Find $7/4$ of 20	35
12.5	Find $1/2$ of 18	9

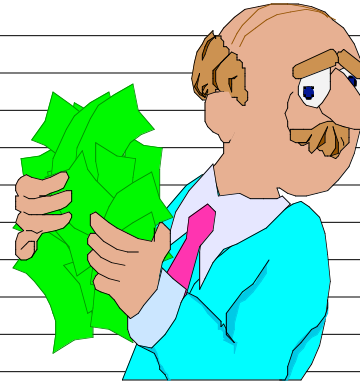
# FRACTION ALLEY    COMPUTATION BLOCK

12.625	Find $\frac{1}{2}$ of 20	10
12.75	Find $\frac{1}{4}$ of 36	9
12.875	Find $\frac{3}{4}$ of 40	30
13	Find $\frac{3}{4}$ of 8	6
13.125	Find $\frac{9}{4}$ of 24	54
13.25	Find $\frac{1}{2}$ of 125	62.5
13.375	Find $\frac{3}{4}$ of 24	18
13.5	Find $\frac{5}{4}$ of 16	20
13.625	Find $\frac{1}{2}$ of 18	9
13.75	Find $\frac{3}{4}$ of 12	9
13.875	Find $\frac{1}{2}$ of 1000	5000
14	Find 200% of 16	32
14.125	Find 150% of 16	24
14.25	Find 75% of 32	24
14.375	Find 150% of 12	18
14.5	Find 40% of 50	20
14.625	Find $\frac{1}{4}$ of 24	6
14.75	Find 10% of 65	6.5
14.875	Find 300% of 20	60
15	Find $\frac{2}{3}$ of 120	80
15.125	Find $\frac{7}{2}$ of 20	70
15.25	$8.2 \times 3$	24.6
15.375	$9.5 \times 5$	47.5
15.5	$11 \times 11$	121
15.625	10 more than $6 \times 6$	46
15.75	5 less than $6 \times 8$	43
15.875	the square root of 49	7
16	the square root of 81	9
16.125	Find 20% of 60	12
16.25	$76 + 52$	128
16.375	$80 - 21$	59
16.5	$500 \div 25$	20
16.625	11 more than $4 \times 5$	31
16.75	10 less than $5 \times 9$	35
16.875	$14 - 4.9$	9.1



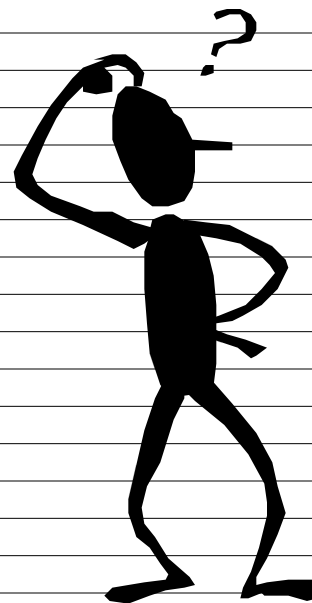
## FRACTION ALLEY COMPUTATION BLOCK

17	$20 + 40 - 15$	45
17.125	$1.9 + 1 + .1$	3
17.25	$30.5 \times 5$	152.5
17.375	$\frac{1}{4} \times \frac{1}{2}$	$\frac{1}{8}$
17.5	$\frac{2}{1} \times \frac{4}{3}$	$2 \frac{2}{3}$
17.625	$\frac{6}{8} \times \frac{1}{2}$	$\frac{3}{8}$
17.75	$\frac{3}{4}$ divided by $\frac{1}{4}$	3
17.875	$\frac{3}{4}$ divided by $\frac{1}{2}$	$1 \frac{1}{2}$
18	$\frac{2}{2}$ divided by $\frac{4}{4}$	1
18.125	$\frac{6}{4}$ divided by $\frac{5}{4}$	$1 \frac{1}{5}$
18.25	$\frac{4}{4}$ divided by $\frac{2}{4}$	2
18.375	$\frac{4}{1} \times \frac{1}{2}$	8
18.5	$\frac{6}{4} \times \frac{2}{2}$	$1 \frac{1}{2}$
18.625	$\frac{2}{4} \times \frac{3}{2}$	$\frac{3}{4}$
18.75	$\frac{4}{2} \times \frac{1}{2}$	1
18.875	$\frac{2}{1}$ divided by $\frac{4}{2}$	1
19	$\frac{6}{2} \times \frac{1}{2}$	$1 \frac{1}{2}$
19.125	$\frac{1}{2}$ divided by $\frac{4}{2}$	$\frac{1}{4}$
19.25	$\frac{2}{4}$ divided by $\frac{1}{2}$	1
19.375	$\frac{6}{4}$ divided by $\frac{1}{2}$	3
19.5	$\frac{2}{2} \times \frac{5}{1}$	5
19.625	$\frac{1}{3}$ divided by $\frac{2}{4}$	$\frac{2}{3}$
19.75	$\frac{1}{2}$ divided by $\frac{3}{2}$	$\frac{1}{3}$
19.875	$\frac{1}{4}$ divided by $\frac{6}{2}$	$\frac{1}{12}$
20	$\frac{3}{4} \times \frac{2}{2}$	$\frac{3}{4}$
20.125	$\frac{2}{2}$ divided by $\frac{5}{2}$	$\frac{2}{5}$
20.25	$\frac{3}{8}$ divided by 2	$\frac{3}{16}$
20.375	$\frac{3}{4} \times \frac{5}{4}$	$\frac{15}{16}$
20.5	$\frac{1}{4}$ divided by $\frac{2}{4}$	$\frac{1}{2}$
20.625	$\frac{4}{1}$ divided by $\frac{3}{1}$	$1 \frac{1}{3}$
20.75	$\frac{2}{2} \times \frac{2}{2}$	1
20.875	$\frac{1}{8} \times \frac{1}{4}$	$\frac{1}{32}$
21	$\frac{4}{1}$ divided by $\frac{3}{1}$	$1 \frac{1}{3}$
21.125	$\frac{1}{2} \times \frac{1}{2}$	$\frac{1}{4}$
21.25	$\frac{3}{4}$ divided by $\frac{4}{4}$	$\frac{3}{4}$



# FRACTION ALLEY COMPUTATION BLOCK

21.375	Find 400% of 23	92
21.5	$\frac{1}{4}$ divided by $\frac{6}{4}$	$\frac{1}{6}$
21.625	$\frac{4}{4} \times \frac{1}{4}$	$\frac{1}{4}$
21.75	$5.6 \times 9$	50.4
21.875	$\frac{2}{9} \times 2$	$\frac{4}{9}$
22	$12 \times \frac{1}{2}$	6
22.125	$\frac{1}{2} \times \frac{5}{1}$	$2 \frac{1}{2}$
22.25	$\frac{1}{3}$ divided by 4	$\frac{1}{12}$
22.375	$\frac{1}{4} \times \frac{6}{4}$	$\frac{3}{8}$
22.5	$\frac{1}{5} \times \frac{3}{4}$	$\frac{3}{20}$
22.625	$\frac{4}{2}$ divided by $\frac{1}{4}$	8
22.75	12 divided by $\frac{4}{4}$	12
22.875	$32 \times \frac{1}{2}$	16
23	$\frac{1}{2}$ divided by $\frac{1}{2}$	1
23.125	$20 - 5 \frac{1}{3}$	$14 \frac{2}{3}$
23.25	$\frac{1}{4} \times \frac{3}{4}$	$\frac{3}{16}$
23.375	$\frac{3}{2}$ divided by $\frac{2}{3}$	$2 \frac{1}{4}$
23.5	$\frac{5}{4} \times \frac{6}{4}$	$1 \frac{7}{8}$
23.625	$\frac{5}{4} \times \frac{2}{4}$	$\frac{5}{8}$
23.75	$6.6 \times 1.2$	7.92
23.875	$2.4 \times 5.1$	12.24
24	$6.4 \div .8$	8
24.125	$2.4 + 12.6$	15
24.25	$100 - 19$	81
24.375	$100 - 16$	84
24.5	$5.6 \times 100$	560
24.625	$24.7 \times 100$	2470
24.75	908 divided by 8	113.5
24.875	45 divided by 45	1
25	65 divided by 65	1
25.125	$\frac{1}{8} \times \frac{1}{8}$	$\frac{1}{64}$
25.25	$79 + 31$	110
25.375	10 divided by $\frac{1}{2}$	20
25.5	$\frac{9}{9} \times \frac{3}{3}$	1
25.625	$\frac{1}{2}$ divided by $\frac{3}{2}$	$\frac{1}{3}$





# FRACTION ALLEY COMPUTATION BLOCK

25.75	100 - 76	24
25.875	600 - 475	125
26	119 + 81	200
26.125	259 + 31	290
26.25	14 x 14	196
26.375	11 x 63	693
26.5	308 divided by 4	77
26.625	1025 divided by 5	205
26.75	Raise 3 to the fourth power.	81
26.875	Raise 2 to the fifth power.	32
27	Raise 5 to the third power.	125
27.125	Raise 10 to the third power.	1,000
27.25	Raise 4 to the third power.	64
27.375	Raise 2 to the sixth power.	64
27.5	Raise 100 to the second power.	10,000
27.625	Raise 1/2 to the third power.	1/8
27.75	Raise 2 to the third power.	8
27.875	What is the square root of 121?	11
28	What is the square root of 256?	16
28.125	What is the square root of 144?	12
28.25	What is the square root of 196?	14
28.375	What is the square root of 169?	13
28.5	What is the square root of 289?	17
28.625	1/4 x 2/4	1/8
28.75	1/1 divided by 4/4	1
28.875	Find 25% of 60	15
29	Find 200% of 65.6	131.2
29.125	70 - 20.1	49.9
29.25	55.5 + 25.5	81
29.375	200 ÷ 10	20
29.5	Find fifty more than 7 x 5	85
29.625	Find twenty less than 10 x 10	80
29.75	Find fifteen more than 20 ÷ 4	20
29.875	11 + 19 + 33	63
30	7.1 x 10	71



## FRACTION ALLEY COMPUTATION BLOCK

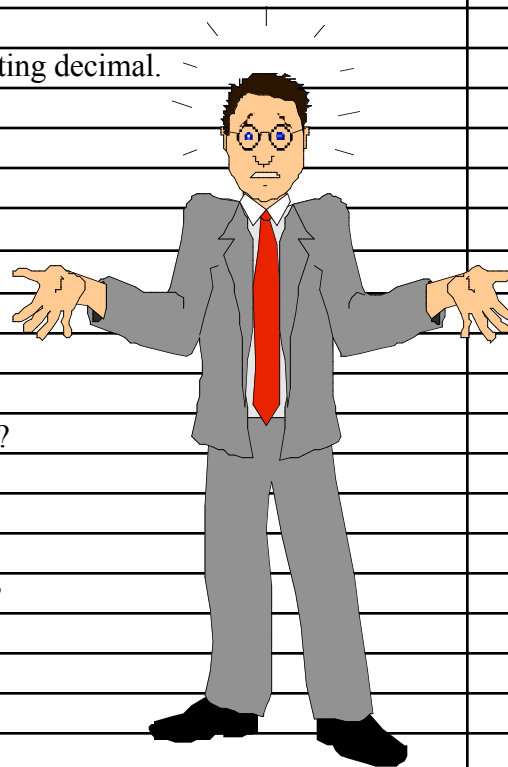
30.125	$285 + 45$	330
30.25	$196 + 204$	400
30.375	$300 - 82$	218
30.5	$500 - 196$	304
30.625	6624 divided by 4	1656
30.75	5001 divided by 3	1667
30.875	Find 250% of 25	62.5
31	$5 \frac{2}{2} \times 2 \frac{1}{2}$	15
31.125	$5 \frac{1}{2}$ divided by $\frac{1}{4}$	22
31.25	$9 \frac{4}{4} - 5 \frac{2}{4}$	$4 \frac{1}{2}$
31.375	$3 \frac{1}{4} + 1 \frac{4}{4}$	$5 \frac{1}{4}$
31.5	Find 20% of 65	13
31.625	$100 - 60.8$	39.2
31.75	$1 \frac{1}{2}$ divided by $\frac{1}{2}$	3
31.875	$7 \frac{1}{4} - 3 \frac{1}{2}$	$3 \frac{3}{4}$
32	$5 \frac{1}{2}$ divided by $\frac{1}{2}$	11
32.125	$3 \frac{1}{2} \times 4 \frac{3}{4}$	$16 \frac{5}{8}$
32.25	$7 \frac{1}{4} - 4 \frac{1}{2}$	$2 \frac{3}{4}$
32.375	$23 \times 23$	529
32.5	$3 \frac{1}{2} + 5 \frac{2}{2}$	6
32.625	$8 \frac{1}{4} - 4 \frac{1}{4}$	4
32.75	$25 \times 25$	625
32.875	$11 \div 5$	2.2
33	$3 \frac{2}{1} \times 5 \frac{1}{1}$	30
33.125	Find 20% of 55	11
33.25	$5 \frac{6}{4} - 2 \frac{3}{4}$	$3 \frac{3}{4}$
33.375	$20 + 99 + 21$	140
33.5	$33 + 33 + 1.2$	67.2
33.625	$2.5 \times 9$	22.5
33.75	Find 50% of 900	450
33.875	Find $\frac{2}{3}$ of 24	16
34	$200 - 151$	49



# FRACTION ALLEY ALGEBRA BLOCK

Fraction Alley - Algebra Block  
Dimension 2000 ©2004

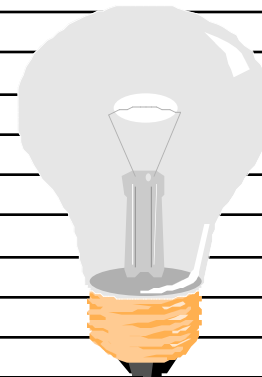
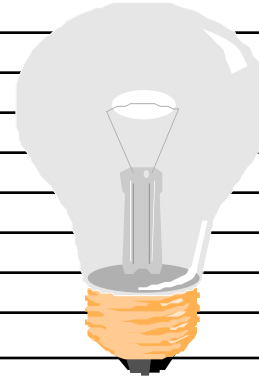
.125	What do we call a symbol that represents a number or value that can change and is unlikely to remain constant?	variable
.25	What is the value of the coefficient in the expression $12x^2y$ ?	12
.375	What is the sum of the exponents on the variables in the expression $4x^3y$ ?	4
.5	How many terms are in the equation $2x + 11 - x = 5x + 4$ ?	5
.625	What is the range of values represented by the inequality $-2 \leq x \leq 12$ ?	14
.750	Find the sum of the absolute values of the integers between 0 and $-5$ .	10
.875	True or False: Zero is not an irrational number.	True
1	True or False: Zero is not an integer.	False
1.125	True or False: Irrational numbers are not considered Real numbers.	False
1.25	True or False: Since the set of integers is infinite, the set of whole numbers is finite.	False
1.375	True or False: The sum of two odd numbers is always even.	True
1.5	True or False: The product of two odd numbers is always odd.	True
1.625	True or False: $\sqrt{2}$ is a rational number.	False
1.750	True or False: Every whole number and every integer is a rational number.	True
1.875	True or False: Every rational number can be written as a terminating or repeating decimal.	True
2	Find the fraction equivalent of $.5555\dots$ repeating.	$5/9$
2.125	True or False: The fraction $7/8$ can be written as a terminating decimal.	True
2.25	True or False: The fraction $5/6$ can be written as a terminating decimal.	False
2.375	True or False: The number $.9999\dots$ repeating is equivalent to 1.	True
2.5	What is the sum of the exponents on the variables in the expression $-6rs^2t$ ?	4
2.625	Find the sum of the first five whole numbers.	10
2.750	What set includes all numbers that can be written as a ratio of integers?	Rational Numbers
2.875	What set includes all the whole numbers and their opposites?	Integers
3	What set is the union of the even whole numbers and the odd whole numbers?	Whole Numbers
3.125	What property name is associated with $a + b = b + a$ ?	Commutative
3.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
3.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
3.5	What property guarantees that the sum of two real numbers is a real number?	Closure
3.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
3.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
3.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.
4	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.



# FRACTION ALLEY

## ALGEBRA BLOCK

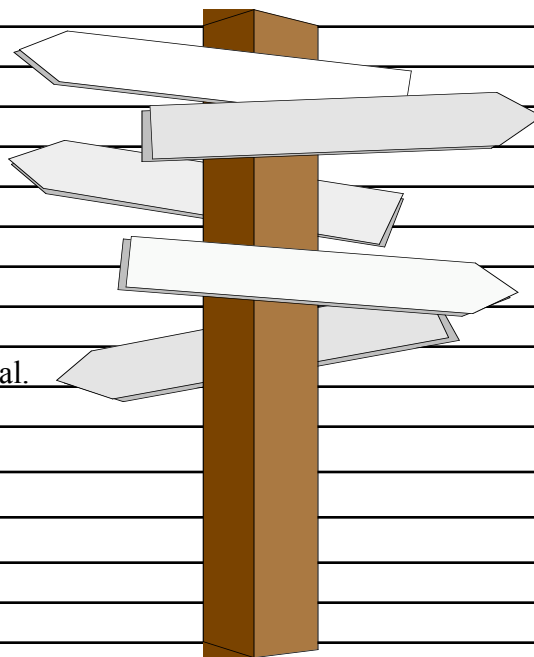
4.125	Evaluate $2a + b$ if $a = 5$ and $b = -8$ .	2
4.25	Evaluate $x^2 + x$ if $x = -1/2$ .	$-1/4$
4.375	Evaluate $-2x^2 + 1$ if $x = -2$ .	$-7$
4.5	Evaluate $m + n$ if $m = 6$ and $n$ equals half of $m$ .	9
4.625	What is the average of the first five counting numbers?	3
4.750	Solve $5x + 10 = 50$ for $x$ .	$x = 8$
4.875	True or False: $\pi$ is not a real number.	False
5	True or False: $0/0 = 1$ .	False
5.125	Solve $(1/2)x + 1 = 26$ for $x$	$x = 50$
5.25	True or False: $x = 9$ is part of the solution of $x - 10 > -1$ .	False
5.375	Evaluate $a/b$ where $a = 95$ and $b = 5$ . Simplify your answer.	19
5.5	What is the name of a polynomial with exactly two terms?	binomial
5.625	What is the name of a polynomial with exactly three terms?	trinomial
5.750	Find the sum of $4x$ , $5xy$ , and $6x$ .	$10x + 5xy$
5.875	True or False: $.25252525\dots$ is a rational number.	True
6	Find the fraction equivalent of $.7777\dots$ repeating.	$7/9$
6.125	True or False: The fraction $10/15$ can be written as a terminating decimal.	False
6.25	True or False: The fraction $x/y$ equals zero when $y$ equals zero.	False
6.375	Find the greatest proper factor of 40.	20
6.5	Find the product of $(1/2)x^2$ and $2x^2$ .	$x^4$
6.625	Find the additive inverse of the binomial $4x - 6$ .	$-4x + 6$
6.750	Find the greatest common factor of $12xy$ and $8yz$ .	$4y$
6.875	Find the least common multiple of 16 and 32.	32
7	Find the sum of the whole number factors of 16.	31
7.125	What property name is associated with $a + b = b + a$ ?	Commutative
7.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
7.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
7.5	What property guarantees that the sum of two whole numbers is a whole number?	Closure
7.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
7.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
7.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.
8	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.



# FRACTION ALLEY

## ALGEBRA BLOCK

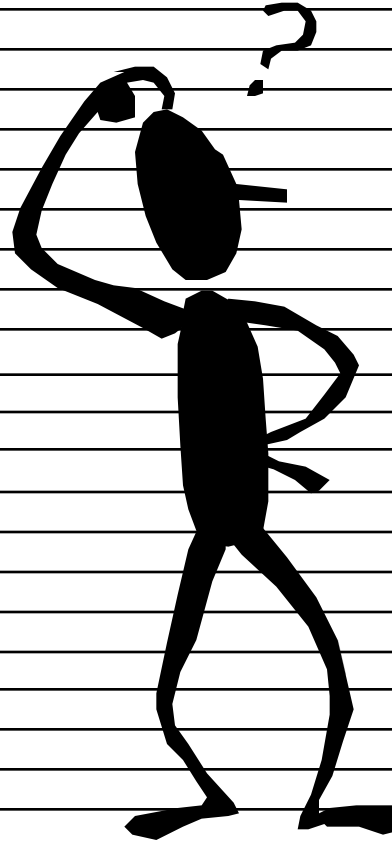
8.125	Name the prime numbers between 10 and 20.	11, 13, 17, 19
8.25	Find the product of $2x^3$ and $5x^3$	$10x^6$
8.375	Find the product of $(\frac{3}{4})x^8$ and $20x^{-6}$ .	$15x^2$
8.5	What prime number has the least value?	2
8.625	What is the average of the first four prime numbers?	4.25
8.750	Solve $11x + 8 = 30$ for x.	$x = 2$
8.875	True or False: $\frac{8}{2}$ is not an integer.	False
9	True or False: $\frac{0}{1}$ is undefined.	False
9.125	Find the sum of $6x + 1$ and $1 - 6x$ .	2
9.25	True or False: Any number, $\neq 0$ , raised to the zero power is 1 .	True
9.375	Evaluate $a - b$ where $a = 6$ and $b = .02$ .	5.98
9.5	What is the square of 12?	144
9.625	What is the square of 15?	225
9.750	What is the square of 17?	289
9.875	True or False: $\sqrt{81}$ is an irrational number.	False
10	Write 80% as a fraction written in lowest terms.	$\frac{4}{5}$
10.125	True or False: The fraction $\frac{1}{5}$ can be written as a terminating decimal.	True
10.25	If $f(x) = 4x - 5$ then $f(8) = ?$	27
10.375	Find the sum of the whole number factors of 20.	42
10.5	Find the quotient of $20x^5y^4$ and $2x^2y$ .	$10x^3y^3$
10.625	If $f(x) = -2x + 11$ then $f(-11) = ?$	33
10.750	Find the greatest common factor of $60xy$ and $45xy$ .	$15xy$
10.875	Find the least common multiple of $3x$ and $5y$ .	$15xy$
11	Find the sum of the whole number factors of 42.	96
11.125	What property name is associated with $a + b = b + a$ ?	Commutative
11.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
11.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
11.5	What property guarantees that the sum of two rational numbers is a rational number?	Closure
11.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
11.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
11.875	What property name is associated with $a \cdot (\frac{1}{a}) = 1$ ?	Inverse of Mult.
12	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.



12.125	Find the slope of the line that contains the points (6,7) and (-1,7).	<b>FRACTION ALLEY</b>	0
12.25	Expand $(x + 4)^2$ .	<b>ALGEBRA BLOCK</b>	$x^2 + 8x + 16$
12.375	Factor $x^2 + 10x + 24$ .		$(x + 6)(x + 4)$
12.5	Name the prime numbers between 50 and 60.		53 and 59
12.625	What is the average of the first five positive multiples of 5?		15
12.750	Solve $-10x - 18 = 20$ for x.		$x = -3.8$
12.875	True or False: The graph of $y=4$ is a vertical line.		False
13	True or False: The graph of $x=4$ is a vertical line.		True
13.125	Find the slope of the line that contains the points (2,2) and (4,8).		3
13.25	Find the y intercept of the graph of $y = 5x + 4$ .		4
13.375	Evaluate $6a - 2b$ where $a= 5$ and $b= 1/2$ .		29
13.5	What is the square of 13?		169
13.625	What is the square of 14?		196
13.750	What is the square of 18?		324
13.875	True or False: $\sqrt{20}$ is an irrational number.		True
14	Write 60% as a fraction written in lowest terms.		$3/5$
14.125	True or False: The fraction $10/7$ can be written as a terminating decimal.		False
14.25	If $f(x) = 5x - 10$ then $f(1) = ?$		-5
14.375	Find the sum of the whole number factors of 18.		39
14.5	Find the quotient of $100x^2y^3$ and $50x^2y$ .		$2y^2$
14.625	If $f(x) = -6x + 7$ then $f(2)= ?$		-5
14.750	What do we call a polynomial with three terms?		trinomial
14.875	The rational and irrational numbers combine to form what set of numbers?		Real
15	Find the slope of the graph of $2x + 2y = 12$ .		-1
15.125	What property name is associated with $a + b = b + a$ ?		Commutative
15.25	What property name is associated with $a(b + c) = ab + ac$ ?		Distributive
15.375	What property name is associated with $( a + b ) + c = a + ( b + c )$ ?		Associative
15.5	What property guarantees that the sum of two whole numbers is a whole number?		Closure
15.625	What property name is associated with $a + (-a) = 0$ ?		Inverse of Addition
15.750	What property name is associated with $a + 0 = a$ ?		Identity of Addition
15.875	What property name is associated with $a \cdot (1/a) = 1$ ?		Inverse of Mult.
16	What property name is associated with $a \cdot 1 = a$ ?		Identity of Mult.



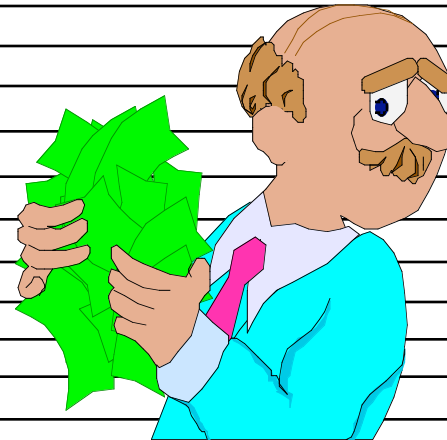
16.125	Find the slope of the line that contains the points $(-2,0)$ and $(4,6)$ .	<b>FRACTION ALLEY</b>	1
16.25	Factor $x^2 + 12x + 35$ .		$(x + 7)(x + 5)$
16.375	Factor $x^2 + 9x + 20$ .	<b>ALGEBRA BLOCK</b>	$(x + 5)(x + 4)$
16.5	Name the prime numbers between 40 and 50.		41, 43 and 47
16.625	What is the average of the factors of 20?	7	
16.750	Simplify $\sqrt{20}$ .	$2\sqrt{5}$	
16.875	What is five less than the square of 2?	-1	
17	True or False: The graph of $y=9$ is a vertical line.	False	
17.125	Find the slope of the line that contains the points $(0,0)$ and $(2,3)$ .	1.5	
17.25	Find the y intercept of the graph of $5x + 2y = 12$ .	6	
17.375	What is twice the sum of 12 and half of 12?	36	
17.5	What is the square of 12?	144	
17.625	What is the square of 11?	121	
17.750	What is the square of 13?	169	
17.875	Simplify $2\sqrt{5} + \sqrt{20}$	$4\sqrt{5}$	
18	Write 75% as a fraction written in lowest terms.	$3/4$	
18.125	True or False: $\pi$ can be written as a terminating decimal.	False	
18.25	If $f(x) = 10x - 10$ then $f(9) = ?$	80	
18.375	Find the y-intercept of the graph of $y= 6 + 9x$ .	6	
18.5	Divide 4 by $1/2$ .	8	
18.625	If $f(x) = -6x + 7$ then $f(2) = ?$	-5	
18.750	What do we call a polynomial with three terms?	trinomial	
18.875	The rational and irrational numbers combine to form what set of numbers?	Real	
19	Find the slope of the graph of $y= -x + 8$ .	-1	
19.125	What property name is associated with $a + b = b + a$ ?	Commutative	
19.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive	
19.375	What property name is associated with $( a + b ) + c = a + ( b + c )$ ?	Associative	
19.5	What property guarantees that the sum of two integers is an integer?	Closure	
19.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition	
19.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition	
19.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.	
20	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.	



# FRACTION ALLEY

## ALGEBRA BLOCK

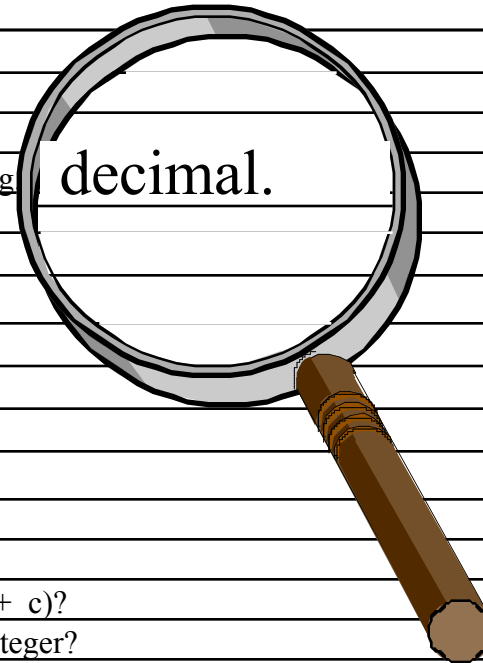
20.125	Evaluate $5x + 2y$ if $x = 4$ and $y = -1/2$ .	19
20.25	Evaluate $x^2 + 2x$ if $x = -1/3$ .	-5/9
20.375	Evaluate $-3x^2 + 6$ if $x = -4$ .	-42
20.5	Evaluate $2m + n$ if $m = 5$ and $n$ equals half of $m$ .	12.5
20.625	What is the average of the first seven counting numbers?	4
20.750	Solve $7x + 11 = 39$ for $x$ .	$x = 4$
20.875	True or False: In a right triangle, the sum of the squares of the legs equals the square of the hypotenuse.	True
21	True or False: Division by zero is undefined in mathematics.	True
21.125	Solve $(3/4)x + 1 = 76$ for $x$	$x = 100$
21.25	True or False: $x = 2$ is part of the solution of $2x - 1 > 6$ .	False
21.375	Evaluate $a/(b+2)$ where $a = 6$ and $b = 1$ . Simplify your answer.	2
21.5	What is the name of a polynomial with exactly two terms?	binomial
21.625	What is the name of a polynomial with exactly three terms?	trinomial
21.750	Find the sum of $2x + 4$ and $6x - 4$ .	$8x$
21.875	True or False: The phrase 'twenty two and one-half percent' is representative of a rational number.	True
22	Find the fraction equivalent of .2222... repeating.	2/9
22.125	True or False: The fraction $7/8$ can be written as a terminating decimal.	True
22.25	True or False: The fraction $x/y$ equals two when $y$ equals half of $x$	True
22.375	Find the greatest proper factor of 100.	50
22.5	Find the product of $4t^2$ and $5t^5$ .	$20t^7$
22.625	Find the additive inverse of the binomial $ax - y$ .	$-ax + y$
22.750	Find the greatest common factor of $12abc$ and $20ab$ .	$4ab$
22.875	Find the least common multiple of $12xy$ and $20xy$ .	$60xy$
23	Find the sum of the whole number factors of 29.	30
23.125	What property name is associated with $a + b = b + a$ ?	Commutative
23.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
23.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
23.5	What property guarantees that the sum of two rational numbers is a rational number?	Closure
23.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
23.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
23.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.
24	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.





24.125	What do we call a symbol that represents a number or value that can change and is unlikely to remain constant?	variable
24.25	What is the sum of the values of the coefficients in the expression $14x^2y + 6xy$ ?	20
24.375	What is the sum of the exponents on the variables in the expression $2xy + 5x^2y$ ?	5
24.5	How many terms are in the equation $5x + 11 - 2x = 7x + 4$ ?	5
24.625	What is the range of values represented by the inequality $-15 \leq x \leq -1$ ?	14
24.750	True or False: The quotient of two even whole numbers is always an even whole number.	False
24.875	True or False: In a right triangle, the sum of the squares of the legs equals the square of the hypotenuse.	True
25	True or False: An integer and a fraction cannot represent the same number.	False
25.125	Solve the system $x + y = 15$ and $x = 2y$ for $x$ and $y$ .	$x=10, y=5$
25.25	True or False: $x = -3$ is part of the solution of $2x + 1 < 0$ .	True
25.375	Evaluate $2a/(b+1)$ where $a=5$ and $b=1$ . Simplify your answer.	5
25.5	What can be used to keep a sandwich fresh and to multiply binomials?	FOIL
25.625	What is the name of a polynomial with exactly three terms?	trinomial
25.750	Solve the system $x + 2y = 20$ and $y = 2x$ for $x$ and $y$ .	$x=4, y=8$
25.875	$2\sqrt{5} + 8\sqrt{5} = ?$	$10\sqrt{5}$
26	Find the fraction equivalent of .4444... repeating.	$4/9$
26.125	True or False: The fraction $1/16$ can be written as a terminating decimal.	True
26.25	True or False: The fraction $x/y$ is greater than 1 when $x > y$ .	True
26.375	Solve the system $2x + y = 10$ and $x - y = -1$ for $x$ and $y$ .	$x=3, y=4$
26.5	Find the product of $5p^6$ and $5p^{-6}$ .	25
26.625	Find the additive inverse of the binomial $2x^2 + x - 1$ .	$-2x^2 - x + 1$
26.750	Find the slope of the line represented by $y = 3x + 9$ .	3
26.875	The graph of $y = 12x - 9$ is what kind of plane figure?	line
27	The graph of $y = 2x^2 + 4x$ is what kind of plane figure?	parabola
27.125	What property name is associated with $a + b = b + a$ ?	Commutative
27.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
27.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
27.5	What property guarantees that the sum of two integers is an integer?	Closure
27.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
27.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
27.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.
28	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.

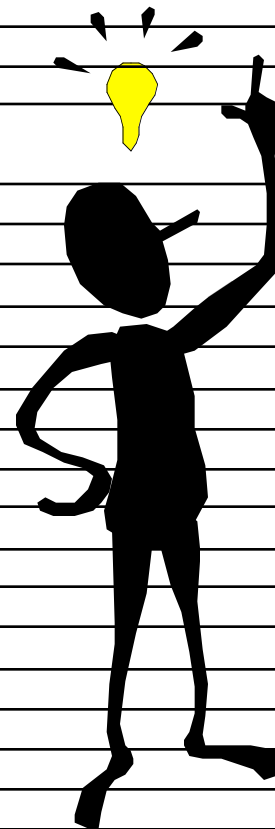
**FRACTION ALLEY**  
**ALGEBRA BLOCK**



# FRACTION ALLEY

## ALGEBRA BLOCK

28.125	Find the slope of the line that contains the points (0,0) and (15,15).	1
28.25	Factor $x^2 + 6x + 5$ .	$(x + 1)(x + 5)$
28.375	Factor $x^2 + 12x + 20$ .	$(x + 10)(x + 2)$
28.5	Name the prime numbers between 60 and 70.	61 and 67
28.625	What is the average of the whole number factors of 18?	6.5
28.750	Simplify $\sqrt{200}$ .	$10\sqrt{2}$
28.875	What is seven more than the square of 8?	71
29	True or False: The graph of $y=x$ is a vertical line.	False
29.125	Find the slope of the line that contains the points (0,0) and (9,3).	1/3
29.25	Find the y intercept of the graph of $x + y + 1 = 0$ .	-1
29.375	What is twice the sum of 15 and the next consecutive number?	62
29.5	What is the square of 19?	361
29.625	What is the square of 18?	324
29.750	What is the square of 13?	169
29.875	Simplify $2\sqrt{5} + \sqrt{45}$	$5\sqrt{5}$
30	Write 60% as a fraction written in lowest terms.	3/5
30.125	True or False: $\pi$ can be written as a fraction.	False
30.25	If $f(x) = 12x - 11$ then $f(3) = ?$	25
30.375	Find the y-intercept of the graph of $y= 5$ .	5
30.5	Divide 6 by 1/2.	12
30.625	If $f(x) = -x - 7$ then $f(2) = ?$	-9
30.750	What do we call a polynomial with three terms?	trinomial
30.875	The rational and irrational numbers combine to form what set of numbers?	Real
31	Find the slope of the graph of $y= -4x + 8$ .	-4
31.125	What property name is associated with $a + b = b + a$ ?	Commutative
31.25	What property name is associated with $a(b + c) = ab + ac$ ?	Distributive
31.375	What property name is associated with $(a + b) + c = a + (b + c)$ ?	Associative
31.5	What property guarantees that the product of two integers is an integer?	Closure
31.625	What property name is associated with $a + (-a) = 0$ ?	Inverse of Addition
31.750	What property name is associated with $a + 0 = a$ ?	Identity of Addition
31.875	What property name is associated with $a \cdot (1/a) = 1$ ?	Inverse of Mult.
32	What property name is associated with $a \cdot 1 = a$ ?	Identity of Mult.



**FRACTION ALLEY**  
**ALGEBRA BLOCK**

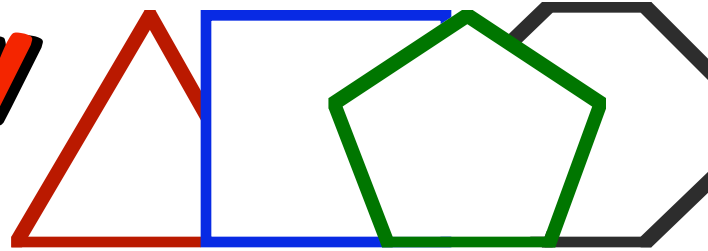
32.125	Evaluate $2(x + y)$ if $x= 2$ and $y= -1/2$ .	3
32.25	Evaluate $x^2 + 2x$ if $x= - 1/2$ .	$-3/4$
32.375	Evaluate $- 3x^2 + 6$ if $x= 5$ .	$-69$
32.5	Evaluate $2m + n$ if $m= 5$ and $n$ is the next consecutive number.	16
32.625	What is the average of the proper factors of 21? Round your answer to the nearest whole number.	5
32.750	Solve $2x + 20 = 68$ for $x$ .	$x= 24$
32.875	True or False: In a right triangle, the sum of the squares of the legs equals the square of the hypotenuse.	True
33	True or False: Division by zero is undefined in mathematics.	True
33.125	Solve $(1/2)x + 9 = 19$ for $x$	$x= 10$
33.25	True or False: If 2 lines are perpendicular, their slopes are negative reciprocals of each other.	True
33.375	The product of 2 consecutive integers is 42. Find the two integers.	6 and 7
33.5	What is the name of a polynomial with exactly two terms?	binomial
33.625	What is the name of a polynomial with exactly three terms?	trinomial
33.750	Find the sum of three consecutive integers if the first integer is $- 1$ .	0
33.875	True or False: The sum of two irrational numbers is always irrational.	False
34	Find the fraction equivalent of $.3333\dots$ repeating.	$3/9$ or $1/3$





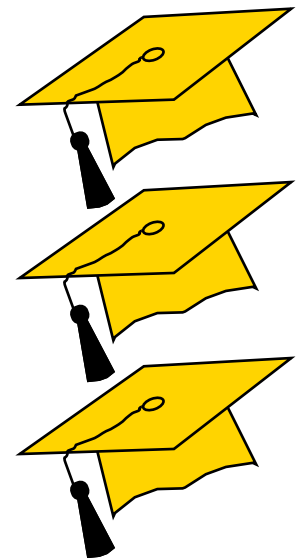
# FRACTION ALLEY

## GEOMETRY BLOCK



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0.125	What geometry term specifies an infinitesimal, single location in space?	point
0.25	What plane figure is determined by two distinct points?	line or line segment
0.375	What geometry term represents a ray minus its endpoint?	half line
0.5	What plane figure is determined by three noncollinear points?	plane
0.625	What geometry term is associated with two angles whose sum is 90 degrees?	complementary
0.75	If B lies on AC and $AB=BC$ then B is called this kind of point.	midpoint
0.875	What do we call the intersection between x and y axes?	origin or (0,0)
1	If B lies on AC between A and C then $AB +$ what equals AC?	BC
1.125	Two angles whose sum is 180 degrees are classified as ...	supplementary
1.25	Two line segments with the same length are ...	congruent
1.375	Two or more points on the same line are ...	collinear
1.5	What geometry term represents two intersecting lines that form 4 right angles?	perpendicular
1.625	What geometry term represents two lines in the same plane that do not intersect?	parallel
1.75	Alternate interior angles from parallel lines cut by a transversal are ...	congruent
1.875	Two adjacent angles in a plane, whose exterior sides form a straight line are called a ...	linear pair
2	Every angle consists of exactly two of these.	rays
2.125	What letter represents the vertex of angle GHT?	H
2.25	Angle XYZ consists of ray YX and ray ...	YZ
2.375	How many endpoints does a line segment have?	two
2.5	Adjacent angles ABC and CBD share which ray?	BC
2.625	If point S lies on segment MD, between M and D, then $MS + SD$ equals ...	MD
2.75	If a single point is removed from a line, two ? are formed.	half lines
2.875	If angles 1 and 3 are vertical angles and angle 3= 40 degrees then angle 1 equals...	40 degrees
3	What word describes the relationship between vertical angles?	congruent
3.125	If 2 angles are complementary to the same angle then they are ? to each other.	congruent
3.25	Two angles with measures 41 degrees and 49 degrees are ? to each other.	complementary
3.375	If 2 angles are supplementary to the same angle then they are ? to each other?	congruent
3.5	Angles A and B are complementary and $A=40$ degrees. Find the measure of angle B.	50 degrees
3.625	Angles A and B are vertical and $A=40$ degrees. Find the measure of angle B.	40 degrees
3.75	Angles A and B are supplementary and $A=60$ degrees. Find the measure of angle B.	120 degrees



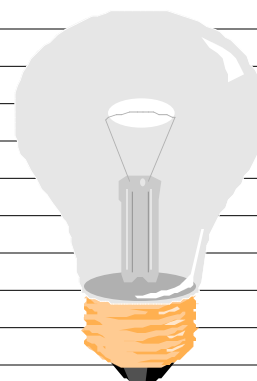
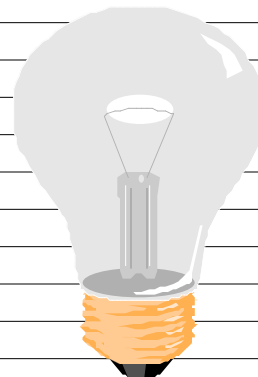
# FRACTION ALLEY GEOMETRY BLOCK

3.875	Are two right angles complementary or supplementary?	supplementary
4	An angle bisector divides the angle into two ? angles.	congruent
4.125	Geometric figures with the same shape and size are called ...	congruent
4.25	Two lines parallel to a third line are ? to each other.	parallel
4.375	Two lines in a plane that are perpendicular to the same line are ? to each other.	parallel
4.5	If 3 distinct points are collinear then one must be ? the other two.	between
4.625	Three distinct noncollinear points determine how many lines?	3
4.75	If angle ABC is 70 degrees then its complement is ? degrees?	20
4.875	Two angles whose sum is 180 degrees are classified as ...	supplementary
5	All right angles have this relationship.	congruent
5.125	Two distinct lines are intersecting, parallel, or?	skew
5.25	Two lines that are skew cannot lie in the same ...	plane
5.375	Lines in the same plane that do not intersect are ...	parallel
5.5	If two lines are parallel to a third line they are ? to each other.	parallel
5.625	By definition, collinear points lie on the same ...	line
5.75	An angle consists of exactly two of these.	rays
5.875	What letter represents the vertex of angle EPV?	P
6	Angle QWY consists of ray WY and ray ...	WQ
6.125	How many endpoints on a line segment?	two
6.25	Adjacent angles share a common ...	ray
6.375	In a plane, how many lines can pass through 1 point?	infinite
6.5	Two opposite rays form a ...	line or straight angle
6.625	If angles 1 and 3 are vertical angles and angle 3= 40 degrees then angle 1 equals...	40 degrees
6.75	True or False: Two distinct rays in a plane must form an angle.	FALSE
6.875	If 2 angles are complementary to the same angle then they are ? to each other.	congruent
7	Two angles with measures 41 degrees and 49 degrees are ? to each other.	complementary
7.125	True or False: If two distinct lines do not intersect, they must be parallel	FALSE
7.25	If one angle of a linear pair measures 40 degrees, the other must measure ...	140 degrees
7.375	The angles of a linear pair are ...	supplementary
7.5	True or False: Two angles that share a common ray must lie in the same plane.	FALSE
7.625	Perpendicular lines form angles whose measures are ....	90 degrees
7.75	A 90 degree angle is called a ...	right angle
7.875	True or False: Parallel lines must lie in a common plane.	TRUE
8	If segment AB is a perpendicular bisector of segment CD, then AB divides CD into....	2 congruent segments
8.125	True or False: Three intersecting lines must lie in the same plane.	FALSE



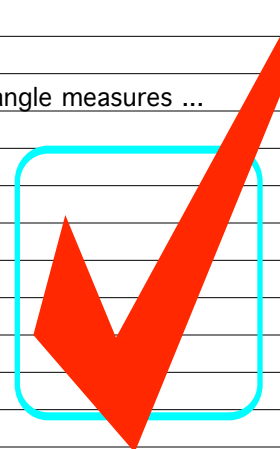
## FRACTION ALLEY GEOMETRY BLOCK

8.25	What geometry term specifies an infinitesimal, single location in space?	point
8.375	What plane figure is determined by two distinct points?	line or line segment
8.5	What geometry term is used for a ray minus its endpoint?	half line
8.625	Three noncollinear points determine this undefined term.	plane
8.75	Two angles whose sum is 90 degrees are ? to each other.	complementary
8.875	If B lies on AC and AB=BC then B is this.	midpoint
9	What do we call the intersection between x and y axes?	origin or (0,0)
9.125	If B lies on AC between A and C then AB + what equals AC?	BC
9.25	What do we call two angles whose sum is 180 degrees?	supplementary
9.375	Two line segments with the same length are ...	congruent
9.5	Three points on the same line are ...	collinear
9.625	True or False: If D is in the interior of angle ABC then angle ABD must be congruent to angle CBD	FALSE
9.75	What do we call lines in the same plane that do not intersect?	parallel
9.875	What is the relationship of consecutive interior angles from parallel lines cut by transversal?	supplementary
10	An angle in a plane divides the plane into 3 parts: the interior of the angle, the angle, and the ...	exterior of the angle
10.125	True or False: Two adjacent angles are always congruent.	FALSE
10.25	What letter represents the vertex of angle GHT?	H
10.375	How many midpoints can a line segment have?	one
10.5	How many endpoints does a line segment have?	two
10.625	Given a single ray, how many line segments are on the ray?	infinite
10.75	If point S lies on segment MD then MS + SD equals ...	MD
10.875	If a single point is removed from a line, two ? are formed.	half lines
11	Between definitions, postulates, and theorems, which can be proven true?	theorems
11.125	What word describes the relationship between vertical angles?	congruent
11.25	If 2 angles are complementary to the same angle then they are ? to each other.	congruent
11.375	Two angles with measures 15 degrees and 75 degrees are ? to each other?	complementary
11.5	If 2 angles are supplementary to the same angle then they are ? to each other.	congruent
11.625	In the Cartesian plane, two lines that have the same slope are ...	parallel
11.75	Angle A is 10 degrees more than half of angle B. Angle B= 60 degrees. Find the measure of angle A.	40 degrees
11.875	How many angles can be formed by two skew lines?	0
12	How many diagonals can be drawn on an octagon?	20
12.125	How many diagonals can be drawn on a triangle?	0
12.25	Find the area of a square with side length $10\sqrt{5}$ inches.	500 sq inches
12.375	Find the perimeter of a square with side length $6\sqrt{3}$ inches.	$24\sqrt{3}$ inches
12.5	What is the relationship between the diagonals of a rectangle?	congruent



## FRACTION ALLEY    GEOMETRY BLOCK

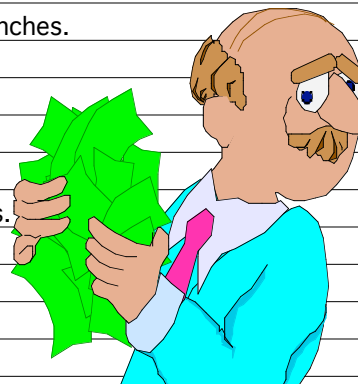
12.625	True or False: A square is also a rectangle.	TRUE
12.75	What specific name is given to a quadrilateral with opposite sides congruent?	parallelogram
12.875	True or False: A rhombus is also a square.	FALSE
13	What specific name is given for a quadrilateral with opposite sides congruent?	parallelogram
13.125	What specific name is given for a triangle with one angle greater than 90 degrees?	obtuse triangle
13.25	True or False: An equilateral triangle is also equiangular.	TRUE
13.375	The measure of an exterior angle of a triangle = the sum of the measures of the 2 ? angles of the triangle.	remote interior
13.5	Find the measure of one interior angle of a regular hexagon.	120 degrees
13.625	What specific name is given for a quadrilateral with four congruent sides?	rhombus
13.75	What theorem states the sum of the squares of the legs = the square of the hypotenuse?	Pythagorean Thm
13.875	What name is given to the longest side in right triangle?	hypotenuse
14	What specific name is given for a triangle with 3 sides congruent?	equilateral
14.125	True or False: SSS and SAS can both be used to prove two triangles congruent.	TRUE
14.25	True or False: Three segments with lengths 5, 15, and 9 inches can form a triangle by joining endpoints	FALSE
14.375	Find the length of the hypotenuse on an isosceles right triangle when one leg= 12.	$12\sqrt{2}$
14.5	Find the length of the hypotenuse on a right triangle when leg1=15 and leg2=20.	25
14.625	What theorem states the sum of squares of legs = square of hypotenuse?	Pythagorean Thm
14.75	What name is given to the longest side in right triangle?	hypotenuse
14.875	The fact that every plane figure is congruent to itself is justified by what property?	Reflexive
15	What specific name is given for a triangle with 3 sides congruent?	equilateral
15.125	True or False: The angles of an equilateral triangle each measure 60 degrees.	TRUE
15.25	True or False: A right triangle can have at least one obtuse angle.	FALSE
15.375	True or False: The base angles of an isosceles triangle are always congruent.	TRUE
15.5	True or False: An isosceles triangle has at least 2 sides congruent.	TRUE
15.625	In a right triangle, if one acute angle measures 25 degrees, then the other acute angle measures ...	65 degrees
15.75	Find the length of the hypotenuse in an isosceles right triangle when one leg= 5.	$5\sqrt{2}$
15.875	Find the length of the hypotenuse when leg1=12 and leg2=16.	20
16	True or False: A parallelogram can sometimes be a square.	TRUE
16.125	True or False: The diagonals of a rhombus are congruent.	FALSE
16.25	True or False: The diagonals of a rhombus are perpendicular.	TRUE
16.375	True or False: The diagonal of a square is twice the length of one of its sides.	FALSE
16.5	True or False: The diagonals of a rectangle are congruent.	TRUE
16.625	The lines containing the altitudes of a triangle intersect at a point called the ...	orthocenter of the triangle
16.75	The three medians of a triangle intersect at a point called the ...	centroid of the triangle
16.875	True or False: Opposite angles of a parallelogram are congruent.	TRUE





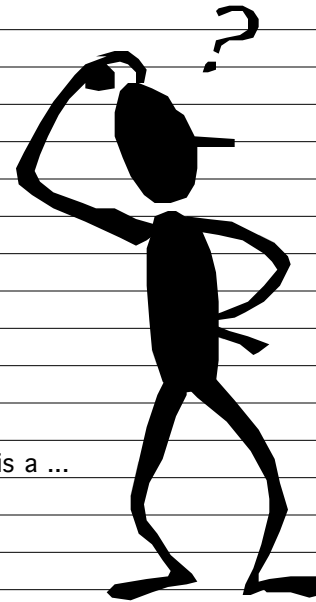
## FRACTION ALLEY    GEOMETRY BLOCK

17	Find the area of a rectangle with side lengths $2\sqrt{5}$ inches and $4\sqrt{5}$ inches.	40 sq inches
17.125	Find the perimeter of a rectangle with side lengths $2\sqrt{5}$ inches and $4\sqrt{5}$ inches.	$12\sqrt{5}$ inches
17.25	State the formula for area of rectangle with length L and width W.	$a=LW$
17.375	State the formula for perimeter of rectangle with length L and width W.	$p= 2L + 2W$
17.5	Find the perimeter of a square with side length $4\frac{1}{2}$ .	18
17.625	An isosceles trapezoid has this many pairs of congruent sides.	1
17.75	Find the area of a triangle with base 12 centimeters and height 8 centimeters.	48 sq cm
17.875	Find the area of a rectangle with L= 10 cm and W= $1\frac{1}{2}$ cm.	15 sq cm
18	Find the area of a square with side length = $2\frac{1}{2}$ inches.	$6\frac{1}{4}$ sq in
18.125	Find the volume of a cube with edge length 3 inches.	27 cubic inches
18.25	Find the surface area of a cube with edge length 2 inches.	24 sq inches
18.375	Find the perimeter of an isosceles triangle with base 12 inches and leg 8 inches.	28 inches
18.5	Find the perimeter of an equilateral triangle with side length 11 inches.	33 inches
18.625	Find the volume of a rectangular solid with L= 10 cm, W= 5 cm, and H=4 cm.	200 cubic cm
18.75	Find the area of a trapezoid with bases 15 and 5 and height 4.7.	47 sq units
18.875	Find the volume of a cube with side length 1 inch.	1 cubic inch
19	Name the theorem that states the sum of the squares of the legs = the square of the hypotenuse	Pythagorean Thm
19.125	Find the perimeter of an equilateral triangle with side length $4\sqrt{2}$ inches.	$12\sqrt{2}$ inches
19.25	Find the area of a rhombus with diagonals 8 inches and 4 inches.	16 sq in
19.375	Find the volume of a cube with side length $2\sqrt{3}$ inches.	$24\sqrt{3}$ cubic inches
19.5	Find the perimeter of an equilateral triangle with side length $6\frac{1}{2}$ inches.	$19\frac{1}{2}$ inches
19.625	Find the perimeter of a parallelogram with side lengths 11 inches and 6 inches.	34 inches
19.75	State the formula for the perimeter of rectangle with length L and width W.	$p= 2L + 2W$
19.875	Find the volume of a rectangular solid with L= 4 cm, W= 4 cm, and H=2 cm.	32 cubic cm
20	State the formula for the area of a triangle with base b and height h.	$\frac{1}{2} bh$
20.125	Find the length of the hypotenuse on an isosceles right triangle when one leg= 12 units.	$12\sqrt{2}$
20.25	Find the length of the hypotenuse of a 30-60-90 triangle with the shortest leg = 7.5 cm.	15 cm
20.375	Find the area of a rhombus with diagonals 20 inches and 10 inches.	100 sq in
20.5	Find the volume of a cube with side length 10 inches.	1000 cubic inches
20.625	Find the length of the hypotenuse of a 30-60-90 triangle with the longest leg = $4\sqrt{3}$ cm.	8 cm
20.75	Find the surface area of a rectangular solid with L= 10 cm, W= 4 cm, and H=6 cm.	248 sq cm
20.875	Find the area of a square with diagonals $\frac{1}{2}$ foot and 6 inches.	$\frac{1}{8}$ sq ft or 18 sq in
21	Find the area of a square with side length $\sqrt{9}$ inches.	9 sq inches
21.125	Find the perimeter of a square with side length $2\sqrt{9}$ inches. Simplify your answer.	24 inches
21.25	What is the sum of the measures of the interior angles of any quadrilateral?	360 degrees



# FRACTION ALLEY GEOMETRY BLOCK

21.375	True or False: A line and a point not on a line are coplanar.	TRUE
21.5	True or False: If two angles are congruent then they must be vertical.	FALSE
21.625	True or False: Angles in a linear pair are always congruent.	FALSE
21.75	True or False: The intersection of two distinct non-parallel planes is always a line.	TRUE
21.875	True or False: Coplanar lines are always parallel or perpendicular.	FALSE
22	True or False: A line can be parallel to a plane.	TRUE
22.125	True or False: A line can be perpendicular to a plane.	TRUE
22.25	True or False: Two planes can be perpendicular.	TRUE
22.375	True or False: Two planes can be parallel.	TRUE
22.5	True or False: A line that is not in a plane can intersect the plane in more than one point.	FALSE
22.625	A scalene triangle has this number of congruent angles.	0
22.75	An acute triangle has this many acute angles.	3
22.875	True or False: A triangle cannot be isosceles and right at the same time.	FALSE
23	True or False: Each angle of an equilateral triangle has measure 60 degrees.	TRUE
23.125	True or False: The acute angles of a right triangle are complementary.	TRUE
23.25	Find the measure of an exterior angle of an equilateral triangle	120 degrees
23.375	A heptagon has this many sides.	7
23.5	A quadrilateral has this many sides.	4
23.625	A pentagon has this many sides.	5
23.75	A hexagon has this many sides.	6
23.875	An octagon has this many sides.	8
24	A decagon has this many sides.	10
24.125	In a polygon, a line segment whose endpoints are two non-consecutive vertices is a ...	diagonal
24.25	The diagonals of a regular polygon are ...	congruent
24.375	The formula for the number of diagonals in a polygon with n sides is ...	$n(n-3) / 2$
24.5	True or False: In hexagon RSTUVX segments ST and TU are consecutive sides.	TRUE
24.625	True or False: In hexagon RSTUVX segments RS and TU are consecutive sides.	FALSE
24.75	True or False: In hexagon RSTUVX segments RT and RX are both diagonals.	FALSE
24.875	True or False: In regular hexagon RSTUVX points X, R, S, and T are vertices of a trapezoid.	TRUE
25	True or False: In regular hexagon RSTUVX points T, U, V, and X are vertices of a trapezoid.	TRUE
25.125	Find the number of diagonals in a decagon	35
25.25	True or False: In regular hexagon RSTUVX points T, S, and U are vertices of an obtuse triangle.	TRUE
25.375	True or False: In regular hexagon RSTUVX points R, S, U, and V are vertices of a square.	FALSE
25.5	True or False: Three radii can divide a regular hexagon in to three congruent rhombuses.	TRUE
25.625	True or False: A regular hexagon consists of two congruent isosceles trapezoids.	TRUE



## FRACTION ALLEY    GEOMETRY BLOCK

25.75	True or False: A kite can have four congruent sides.	FALSE
25.875	Name the instrument used to measure angles drawn on paper	protractor
26	Find the sum of the measures of the angles in a triangle.	180 degrees
26.125	Find the sum of the measures of the angles in a parallelogram.	360 degrees
26.25	Find the sum of the measures of the angles in a pentagon.	540 degrees
26.375	Find the sum of the measures of the angles in a hexagon.	720 degrees
26.5	Find the sum of the measures of the angles in a heptagon.	900 degrees
26.625	Find the sum of the measures of the angles in an octagon.	1080 degrees
26.75	How many faces are on a cube?	6
26.875	How many faces are on a rectangular solid?	6
27	How many faces are on a square based pyramid?	5
27.125	How many faces are on a hexagonal right prism?	8
27.25	How many vertices are on a cube?	8
27.375	How many vertices are on a rectangular solid?	8
27.5	How many vertices are on a square based pyramid?	5
27.625	How many vertices are on a hexagonal right prism?	12
27.75	True or False: An equilateral triangle can be used solely to tessellate the plane.	TRUE
27.875	True or False: A pentagon can be used solely to tessellate the plane.	FALSE
28	True or False: A square can be used solely to tessellate the plane.	TRUE
28.125	True or False: A regular octagon can be used solely to tessellate the plane.	FALSE
28.25	True or False: A regular hexagon can be used solely to tessellate the plane.	TRUE
28.375	True or False: If two parallel lines are cut by a transversal, corresponding angles are congruent.	TRUE
28.5	True or False: If two parallel lines are cut by a transversal, alternate exterior angles are congruent.	TRUE
28.625	True or False: If two parallel lines are cut by a transversal, alternate interior angles are congruent.	TRUE
28.75	True or False: If two parallel lines are cut by a transversal, consecutive interior angles are congruent.	FALSE
28.875	Is a regular hexagon an example of a convex or concave polygon?	convex
29	True or False: Regular polygons are both equilateral and equiangular.	TRUE
29.125	Are the base angles of an isosceles trapezoid always congruent?	yes
29.25	True or False: The diagonals of a rhombus bisect each other.	TRUE
29.375	True or False: If the diagonals of a parallelogram are congruent then the figure is a square or rectangle.	TRUE
29.5	True or False: Both pairs of opposite sides of a parallelogram are congruent.	TRUE
29.625	True or False: The diagonals of a parallelogram bisect each other.	TRUE
29.75	If two triangles are similar, their corresponding angles must be ...	congruent
29.875	The geometric mean between two positive numbers a and b is ...	$\sqrt{ab}$
30	Similarity of polygons is reflexive, symmetric, and ...	transitive



## FRACTION ALLEY    GEOMETRY BLOCK

30.125	What plane figure is defined by the phrase 'points in a plane equidistant from a fixed point'?	circle
30.25	What name is associated with a chord of a circle that contains the center of the circle?	diameter
30.375	In geometry, what is a ray minus its endpoint called?	half line
30.5	In geometry, what word represents the points in a plane equidistant from a fixed point?	circle
30.625	In geometry what word represents a line that intersects a circle in two points?	secant
30.75	What do we call a line in the plane of the circle that intersects the circle in exactly one point?	tangent
30.875	What do we call the point of intersection between a circle and a tangent line?	point of tangency
31	What is the relationship between two circles in a plane that intersect in exactly one point?	tangent
31.125	What is the relationship between a line tangent to a circle and the radius drawn to the point of tangency?	perpendicular
31.25	What is the relationship between two radii from two congruent circles?	congruent
31.375	What name is given to the points in space equidistant from a single fixed point?	sphere
31.5	What figure represents the intersection of a plane and a sphere if the plane contains the center of the sphere?	great circle
31.625	What is the relationship between a plane and a sphere if the plane intersects the sphere in exactly one point?	tangent
31.75	What do we call a line segment that contains two points on a sphere and the center of the sphere?	diameter of the sphere
31.875	What do we call a line segment whose endpoints are a point on a sphere and the center of the sphere?	radius of the sphere
32	How many spheres exist in space?	infinite
32.125	How many circles exist in a plane?	infinite
32.25	How many diameters are associated with one circle?	infinite
32.375	How many centers are associated with one circle?	one
32.5	How many degrees are associated with one circle?	360
32.625	How many degrees are associated with one semicircle?	180
32.75	in a circle, state the number of degrees in an arc subtended by a 45 degree central angle.	45 degrees
32.875	in a circle, state the number of degrees in an arc subtended by a 45 degree inscribed angle.	90 degrees
33	in a circle, state the number of degrees in an arc subtended by a 20 degree central angle.	20 degrees
33.125	in a circle, state the number of degrees in an arc subtended by a 20 degree inscribed angle.	40 degrees
33.25	Find the exact value of the circumference of a circle with radius = 4 inches	$8\pi$ inches
33.375	Find the exact value of the area of a circle with radius = 4 inches	$16\pi$ sq inches
33.5	Find the exact value of the circumference of a circle with radius = 12 inches	$24\pi$ inches
33.625	Find the exact value of the area of a circle with radius = $\frac{3}{8}$ meters.	$(\frac{9}{64})\pi$ sq meters
33.75	Find the exact value of the surface area of a cylinder with base radius 5 inches and height 10 inches	$150\pi$ sq inches
33.875	Find the exact value of the surface area of a sphere with diameter 20 cm	$400\pi$ sq cm
34	Find the exact value of the volume of a sphere with diameter 20 cm	$(\frac{4000}{3})\pi$ cubic cm

