

Test 1.1 - Algebra I

Parent _____

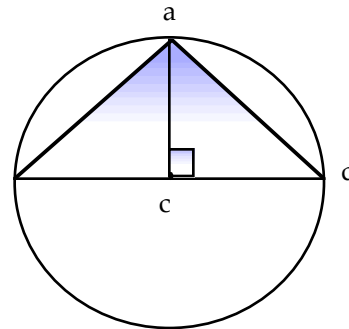
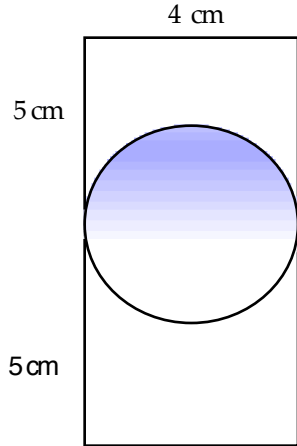
Name _____

Period _____

Area/Circumference/Perimeter

area any circle _____

circumference _____



point 'c' is the center of the circle
radius $cd = ac = 4$ inches

Circle tangent to rectangle of two sides

Expression for the exact area inside rectangle but outside circle

Exact area of triangle _____

Exact area and circumference of circle

area _____

circumference _____

Real Numbers

Rational numbers can be expressed as _____

π and $\sqrt{38}$ are examples of irrational numbers T F

$\sqrt{93}$ is between two perfect square roots $\sqrt{\quad}$ and $\sqrt{\quad}$

An good estimate for $\sqrt{93}$ would be _____

Absolute Value

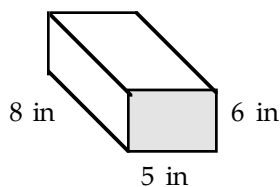
Two equations needed to be solved $|3c - 7| = 17$ _____

Expression/Equation / Inequality ?

$2x + 3 \geq 28$ _____

$3f + 6$ _____

Total Surface Area



$2 \cdot \text{_____} + 2 \cdot \text{_____} + 2 \cdot \text{_____} = \text{Total Surface Area}$

Total Surface area of this right rectangular prism ? _____

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Meaning of ‘-’

example - (-4)

Simplifying expressions

$4a - 3 + 3a - 7 + 2 - 5a + 3c - 2a + 8$

$-(-4t - 3) + 2(-2t + 1) - 3(2t - 5)$

$1/2(-6m - 4) - 3(-m - 1) - (-2x - 5)$

Evaluate Expressions

$2b^2 + 6b + 7$ for $b = -3$

$-3x^2 - 6x + 1$ for $x = -2$

Solving Equations

$7p - 2 - 4p + 8 + 2p - 3 = 17 + 11$

Step 1 _____

simplify

Step 2 _____

constant term (+ -)

Step 3 _____

variable term (÷)

Step 4 _____

p = _____

Equations - simplify then solve for ‘x’ (what ‘x’ makes this equation true?) show all work

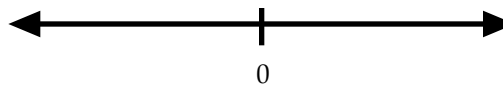
$-(-3x - 4) - 2(x - 6) - (5 - x) = 48 - 17$

x = _____

Inequality

$4y - 7 > 9$

graphical representation



y > _____

Circles

A truck’s wheels are 5 feet in diameter. If the wheels make 9 complete revolutions, approximately how many feet has the truck traveled ?

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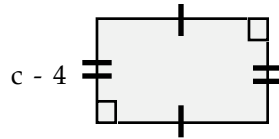
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Problem Solving

a) $3c + 7$ If the perimeter of this rectangle is 70, what is the area?



b) The length of a rectangle is 1 cm more than three the width. If the perimeter is 34 cms, what is the area of the rectangle?

Percent of increase/decrease

Emily is training for her triathlon. Month 1 she ran 20 miles per week. Month 2 she ran 28 miles per week. By what percent did she increase her mile run?

Functions

a) The Aquatic Swim Club charges a nonrefundable membership initiation fee of \$35 and \$25/month in dues. Dues are paid by the whole month. Express this function as an equation, table and graph. Be sure to label your graph.

equation: _____

table

graph
(label axes)



b) In this problem, the domain is the number of months a person is a member of the club. What are the restriction on the domain ?

c) If the new member was going to try the membership out for no more than 6 months, what would be the range of his/her costs - from 1 to 6 months?

Problems

$6 \frac{3}{5} - 2 \frac{7}{8} =$ _____

$2 \frac{2}{3} + 4 \frac{1}{4} + 1 \frac{7}{8} =$ _____

$8 \frac{3}{4} \cdot 2 \frac{2}{7} =$ _____

$6 \frac{3}{4} \div 2 \frac{2}{3} =$ _____

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Distributive property - multiply (extra credit)

$(y - 3)(y + 8)$ _____

$(2x + 3)(x + 4)$ _____

Percents

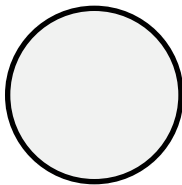
a) Edward had a \$7.85 salad, a \$4.15 bowl of fresh soup, a \$13.05 steak and a \$5.10 piece of apple pie. Yummy. The service was great so he decided to leave a 15 % tip. What was the approximate dollar value of his tip?

b) Jim's sport coat was \$80 , marked down to \$64.
By what percent was the coat discounted?

Measures of central tendency

A student records test scores 86, 75, 72, 79, 68, 81 and 70. The student then computes his/her average at 85. Without finding this average, could this average of 85 be possible? Why or why not? Explain.

Circular Brick Planter



This circular planter has a diameter of 10 feet. The gardener wishes to place 8 inch bricks completely around the planter. Will 50 bricks be enough ?
