

Ruckel Middle School
Niceville, Florida

Middle School Math Packet
Grade 8



Name: _____

Directions: Please show all your work and NO Calculator.

Order of Operations

1) $35 \div 7 \times 2 - 4$

2) $12 + 16 \div (3 + 1)$

3) $2^5 + 7(9 - 1)$

<http://www.funbrain.com/cgi-bin/shtml.cgi?A1=../algebra/index.html>

Work your way through this activity starting with the easiest – to the hardest using all operations.

Expressions

Evaluate when $w = 2$ $x = 3$ $y = 5$ $z = 6$ $p = 9$

1) $y + 3.4$

2) $2p + 5.4$

3) $\frac{2.5w + 2.5}{.5}$

4) $\frac{x^2}{p}$

5) $2.1z + p$

Equations

Solve each equation. Show your work

1) $a + 7 = 16$

2) $4d = 60$

3) $15 = \frac{X}{3}$

4) $h - 22 = 67$

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<http://www.math-play.com/One-Step-Equation-Game.html>

Hoop Shot is a "basketball" game – that reviews one-step equations

Name the Property

1) $2 \times (3 \times 7) = (2 \times 3) \times 7$

2) $6 + 3 = 3 + 6$

3) $18 \times 1 = 18$

4) $8 + (-8) = 0$

5) $2(8 + 2) = 2(8) + 2(2)$

Integers

1) $5 + (-8) =$

5) $-30(5) =$

2) $-11 + (-12) =$

6) $-10(-9) =$

3) $-16 - 14 =$

7) $-24 \div -8 =$

4) $6 - (-31) =$

8) $36 \div -4 =$

<http://www.math-play.com/integers-game.html>

Walk the Plank is a game that reviews addition and subtraction of integers.

<http://www.math-play.com/Integers-Jeopardy/Integers-Jeopardy.html>

This is a jeopardy game to review all operations with integers. You can play this by yourself or with a friend.

<http://www.aaamath.com/g76-absolute-value.html>

<http://www.aaamath.com/g76-mult-negative.html>

<http://www.aaamath.com/g76-div-negative.html>

The above websites are not games – they are a learning unit. I would suggest a review of absolute value.

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Solve each equation

1) $6 + y = -18$

4) $-9x = -63$

2) $x - 18 = -2$

5) $-56 + y = 40$

3) $p - 11 = -5$

6) $32 = -2f$

<http://www.aplusmath.com/Games/PlanetBlast/index.html>

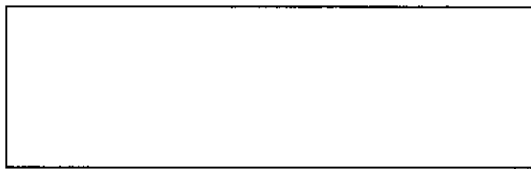
This is a game to solve one-step equations

http://www.harcourtschool.com/activity/escape_planet_6/

Escape Planet X is a game matching verbal to algebraic expressions

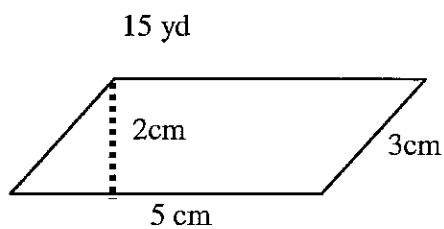
Geometry

Find the perimeter and area of each



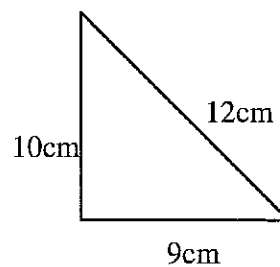
P = _____

A = _____



A = _____

P = _____

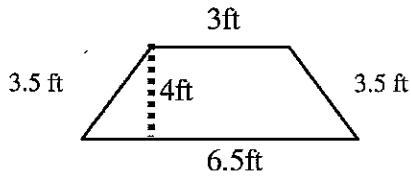


A = _____

P = _____

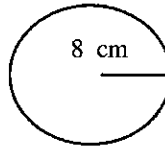
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Find the area of:



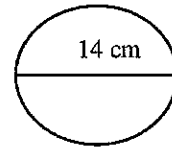
A = _____

P = _____



A = _____

C = _____



A = _____

C = _____

Prime Factorization

1) 93

2) 425

Fractions

1) $8\frac{3}{7} - 2\frac{1}{2}$

4) $3\frac{6}{7} \times 2\frac{1}{10}$

2) $2\frac{1}{8} + 6\frac{9}{10}$

5) $2\frac{1}{2} \div 3\frac{1}{3}$

3) $\frac{6}{7} \div \frac{10}{11}$

6) $5\frac{1}{8} \times 6\frac{6}{11}$

Metric

1) 660m = _____ km

2) 5.7m = _____ cm

3) 543 mL = _____ L

4) 2,640 mL = _____ L

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5) 250.3 kL = _____ L

6) 89 km = _____ m

Percent

1) Find 80% of 80

2) What is 95% of 600?

3) What is 75% of 240?

4) 50 is 20% of what number?

5) What percent of 20 is 4?

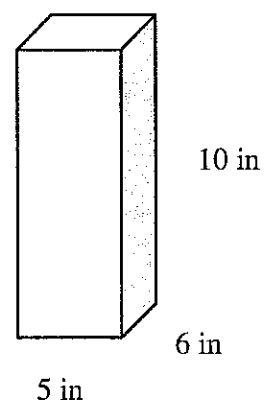
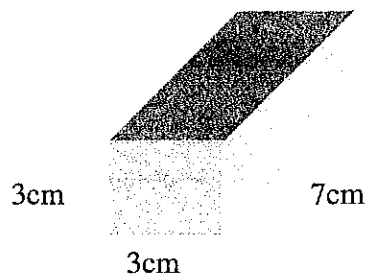
6) 10 is 5% of what number?

7) What % of 90 is 36?

8) 73 is 20% of what number?

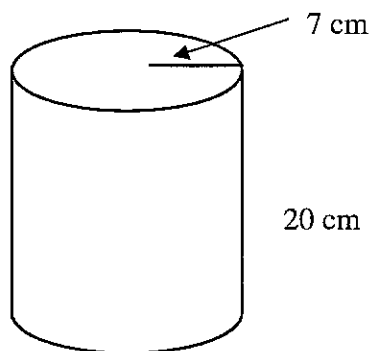
9) 85% of 190 is what number?

Find the volume of:

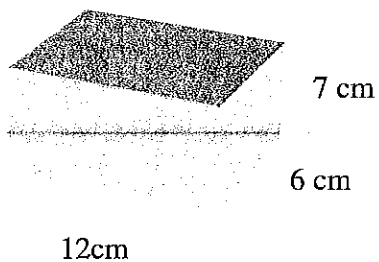


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Use the formula $V = \pi r^2 h$



Find the surface area of:



Word Problems

- 1) Terry wants to use a cookie recipe that makes 36 cookies but wants to reduce the number of cookies to 24. If the recipe specifies using 2 cups of sugar, how much sugar will he need? (HINT: THINK DOZEN)

- 2) Ed earned \$112 for 8 hours of work. At this rate, how much will he earn of 40 hours of work?

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- 3) Rita traveled 1,250 miles the first 3 days of her trip. At this rate how long will it take her to travel 1,875 miles?
- 4) An architect built a model of a 220 ft tall building. The model is 25 inches tall and 10 inches wide. How wide is the actual building?

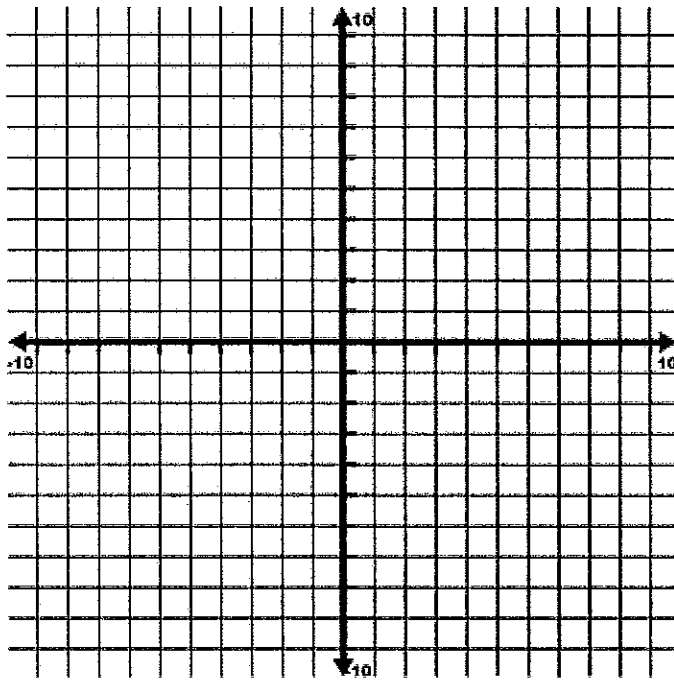
Variables and Patterns:

- 1) Use the rule to complete the table and then graph.

$y = x + 4$

X	1	2	3	10	20
Y					

Write: What do you notice about the changes in X compared to the changes in Y?



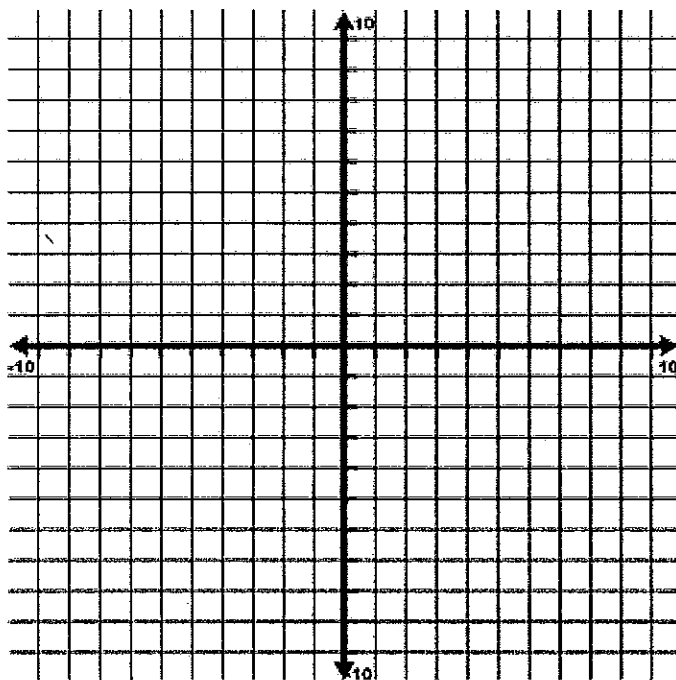
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2) Use the rule to complete the table

$$y = \left(\frac{1}{2}\right)x$$

X	2	4	6	8	10
Y					

Write: What do you notice about the changes in X compared to the changes in Y?



3) Write a rule for the relationship between the variables represented in the table below.

X	Y
1	4
2	8
3	12
4	16
5	20
6	24