

Name _____ Sect _____

Review Packet #1:

ALL WORK MUST BE SHOWN!!!

SHOW WHAT YOU KNOW. SHOW SET-UP AND SUPPORTING WORK WHEN APPLICABLE.

All problems are topics we've studied in class during the first marking period. Use your journal, classwork, homework, and graded tests as a resource to show and solve the problems.

Word Problems

Lakeside Club rents boats for a cost of \$12 plus \$2.50 per hour. Tammy rents a boat and is charged a total cost of \$24.50. How many hours did she rent the boat?

What are they asking? (1 pt)

What do they tell us? (2 pt)

What key words do you see? (2 pt)

Set up the number sentence and solve (2 pts):

Integers (Must show set-up – Look at our rules for each operation) (1 pt each)

$$(-8) + 3$$

$$(-19) + (-8)$$

$$(-8) - 5$$

$$7 - (-11)$$

$$(-9)(5)$$

$$(-11)(-4)$$

$$(-28) \div (-4)$$

$$(-132) \div 11$$

1-and-2-step equations for Missing Variable (Show all steps) (3 pts each)

$x - 17 = 12$

$12 + y = 3$

$2z - 9 = 27$

$17 + 3a = 50$

$3b = 51$

$\frac{c}{5} = 12$

$12 + \frac{d}{4} = 11$

$(-5) - 6e = 37$

Rational Numbers

Convert decimals to fractions in simplest terms: (2 pts each)

$1.8 = \underline{\hspace{2cm}}$

$.36 = \underline{\hspace{2cm}}$

$2.104 = \underline{\hspace{2cm}}$

Convert fractions to decimals: (2 pts each)(Calculators are allowed, but you must show how you set up problem)

$\frac{5}{8} = \underline{\hspace{2cm}}$

$3\frac{5}{6} = \underline{\hspace{2cm}}$

$4\frac{3}{20} = \underline{\hspace{2cm}}$

Irrational Numbers, Exponents and Roots

Simplify: Show in expanded form and final answer: (2 pts each)

$3^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$6^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$(-2)^5 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$\left(\frac{3}{4}\right)^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Tell whether each number is rational or irrational (1 pt each)

2.833 _____

10.25 _____

8.278489290253 ... _____

$\sqrt{225}$ _____

$\sqrt{231}$ _____

$7\frac{2}{3}$ _____

Approximate the value of the following irrational numbers: (2 pts each)

$\sqrt{7}$ is between _____ and _____. It is closer to _____

$\sqrt{78}$ is between _____ and _____. It is closer to _____

$\sqrt{109}$ is between _____ and _____. It is closer to _____

$\sqrt[3]{655}$ is between _____ and _____. It is closer to _____

<, >, or = : (1 pt each)

14 _____ $\sqrt{200}$

$\sqrt{256}$ _____ 16

$\sqrt[3]{1000}$ _____ 10.05

Using roots to solve problems: (3 points each)

A cubic box has a volume of 729 cubic inches. What is the height of the box?

The Howard's have a square rug with an area of 169 square feet. Their new living room is a rectangle measuring 12' w by 15 l. Will the rug fit in their new living room? Show why or why not.

Exponent Operations

Exponential Properties

$$a^m \cdot a^n = a^{m+n}$$

$$(a^m)^n = a^{m \cdot n}$$

$$\frac{a^m}{a^n} = a^{m-n}$$

$$a^{-1} = \frac{1}{a}$$

Simplify the following expressions. Show in exponential form. (1 pt each)

$7^4 \cdot 7^5$ _____

$\frac{4^6}{4^3}$ _____

$x^{10} \div x^7$ _____

$(6^5)^3$ _____

$(5^2 \cdot 3^2)$ _____

$(11^3 \cdot 3^4)^5$ _____

$(a^4 b^3)^2$ _____

$\frac{g^8}{g^5}$ _____

$\frac{d^5 e^4 f^{10}}{d^3 e^4 f^9}$ _____

Negative and Zero Exponents

Simplify: (1 pt each)

$3.125^0 =$ _____

$2^{-3} =$ _____

$x^{-5} =$ _____

Use what we know about order of operations and exponents to solve each expression: (Show all steps) (2 pts each)

$5(3)^3$

$2^4(5+3)^0$

$\frac{(9-1)^1}{5^2-21}$

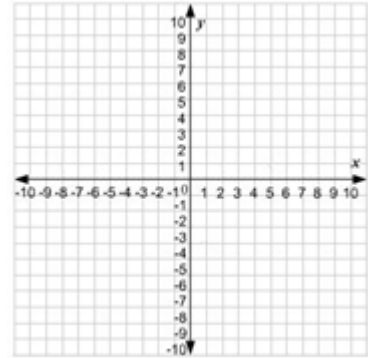
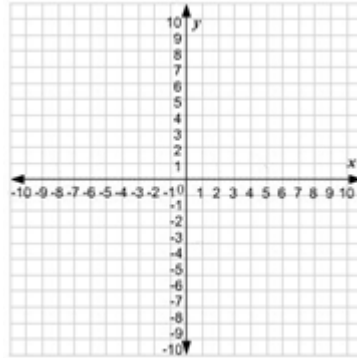
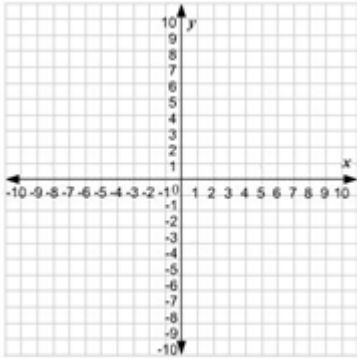
SLOPE

Use the given slope and point to graph a line:

slope: 2 (0, 6)

slope: 1/4 (-4, -7)

slope -3: (-3, 6)



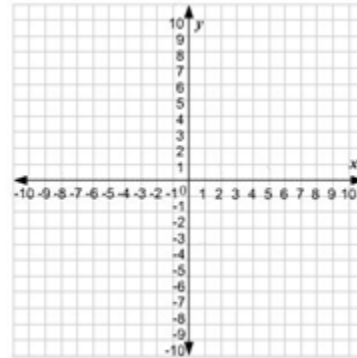
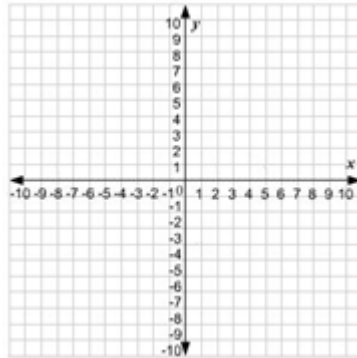
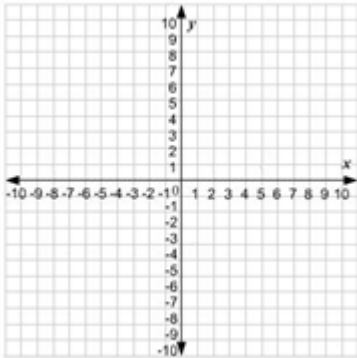
$$m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Graph the line containing the given points. Calculate the slope.

(1, 5) (5, 3)

(0, 8) (4, 0)

(-4, 8) (2, 7)



(4, 6) (-5, 6)

(1, 4) (-2, -5)

