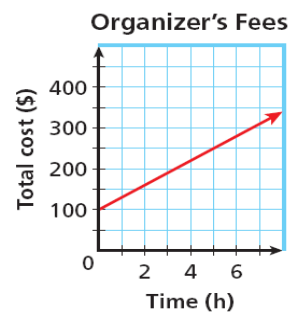


“PRACTICE” Quiz 2... Warm Ups Days # 16 – 40 (Expressions and Equations)**Section 1: Multiple choice.**

- _____ 1) A company makes a bags of popcorn that has 8^3 pieces. The bags of popcorn are shipped in boxes that each contain 8^2 bags. The boxes are loaded into trucks that each hold 8^3 boxes. What is the total number of popcorn pieces the truck can hold?
- A. 8^8 B. 8^{18} C. 512^8 D. 512^{18}
- _____ 2) Which expression is equivalent to $\frac{6^5 \cdot 5^6}{6^8 \cdot 4 \cdot 5^8}$?
- A. $\frac{1}{120^6}$ B. $\frac{6^3 \cdot 5^2}{4}$ C. $\frac{1}{6^3 \cdot 4 \cdot 5^2}$ D. $\frac{30^{11}}{120^{17}}$
- _____ 3) Solve: $x^2 = \frac{1}{81}$
- A. $\pm \frac{1}{9}$ B. $-\frac{1}{9}$ C. $\frac{1}{9}$ D. ± 9
- _____ 4) A new graphing calculator is in the shape of a cube and has a volume of 216 cubic in. The length (c), in inches, of one side of the calculator can be found by solving $c^3 = 216$. Which answer represents the length of one side of the graphing calculator?
- A. 14.7 B. 15 C. 6 D. 5.5
- _____ 5) Which answer has the pizza toppings in the table at the right ordered from least to greatest in terms of how many of each pizza was ordered last year from Pizza Zone?
- A. Veggie, Pepperoni, Pain, Buffalo
 B. Buffalo, Veggie, Plain, Pepperoni
 C. Veggie, Buffalo, Pepperoni, Plain
 D. Pepperoni, Plain, Veggie, Buffalo
- | Pizza Topping | Number |
|-----------------|--------------------|
| Plain Cheese | 3.06×10^9 |
| Pepperoni | 2.97×10^9 |
| Veggie | 1.02×10^6 |
| Buffalo Chicken | 5.45×10^8 |
- _____ 6) A microscope set on 10,000X makes an object appear 10,000 times its actual size. If a bacterium is 4×10^{-7} millimeters in diameter, how large will it appear under the microscope?
- A. 0.0004 mm B. 0.004 mm C. 0.04 mm D. 4 mm
- _____ 7) A closet organizer charges a one-time consultation fee plus a rate per hour. The cost as a function of the number of hours worked is graphed below. What is the hourly rate of the closet organizer based on the graph below?
- A. \$25 per hour B. \$100 per hour
 C. \$30 per hour D. \$20 per hour
- _____ 8) Solve the system of equations: $5x - 6y = -32$ and $3x + 6y = 48$
- A. (7, 2) B. (2, 7) C. $(-2, \frac{11}{3})$ D. (8, 4)



- _____ 9) Pippa needs $\frac{2759}{25}$ feet of fabric for a picnic blanket. The total amount of fabric needed, f , in feet, is found using the formula $f = 4\left(w + \frac{4}{5}w\right) + 0.2$. Find the width of Pippa's picnic blanket.
- A. $\frac{691}{45}$ B. $\frac{153}{10}$ C. $\frac{1377}{40}$ D. 5.3

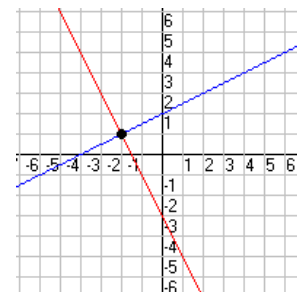
- _____ 10) What is the rule for the table below?

x	0	1	2	3	4
y	1	2	5	10	17

- A. $y = x + 1$ B. $y = x^2 - 1$
 C. $y = x^2 + 1$ D. $y = 2x + 1$

- _____ 11) Which of the following systems of equations represents the graph below?

- A. $y = 0.5x + 2$
 $y = -2x - 3$
 B. $y = 2x + 0.5$
 $y = -3x - 2$
 C. $y = -0.5x + 2$
 $y = 2x - 3$
 D. $y = 2x + 2$
 $y = -2x - 3$



- _____ 12) Each leg of an isosceles triangle is 2 inches shorter than one-third the length of the base. If the perimeter of the isosceles triangle is 20 inches, what is the length of one leg of the isosceles triangle?
- A. 8.2 in. B. 14.4 in C. 2.8 in D. 14 in

Section 2: Open-Ended.

- 13) Doc McStuffins charges a service fee to fix a broken toy. She then charges an additional hourly fee for each hour worked. She charged \$22 for working 4 hours on a stuffed dragon. She charged \$37 for working 7 hours on a stuffed snowman.

A. Let x = the service fee and let y = the hourly fee. Write a linear equation for the cost of repairing the stuffed dragon.

B. Let x = the service fee and let y = the hourly fee. Write a linear equation for the cost of repairing the stuffed snowman.

C. Using your equations from **part A** and **part B**, solve the system of equations.

D. In the context of this problem, what does the solution to the system represent?

