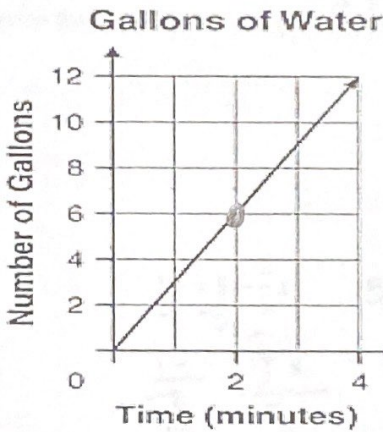


- 1 What is the constant of proportionality in the graph below?



x, y
 $(2, 6)$
 $COP = \frac{y}{x} = \frac{6}{2} = 3$

3 gal/min

- 2 What is the COP in number 1 as a ^{ordered pair} unit rate? What is the equation that represents the graph in number 1?

$\frac{y}{x} \frac{3 \text{ gal}}{1 \text{ min}} (1, 3) \quad y = 3x$

- 3 Solve for x:

$$-8 = -6 - \frac{1}{2}x$$

$$+6 \quad +6$$

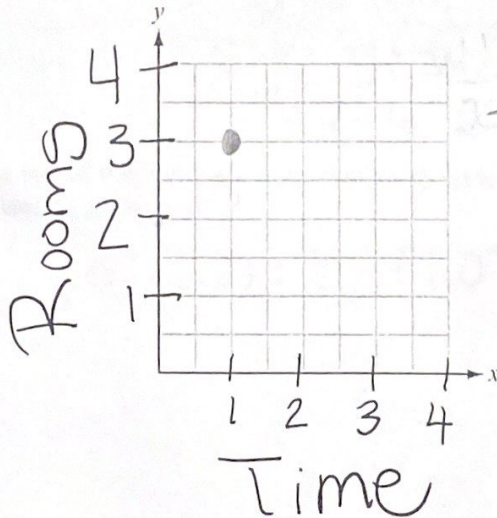
$$-2 = -\frac{1}{2}x$$

$$-2 \cdot -\frac{2}{1} = 4 \quad -\frac{1}{2}x \cdot -\frac{2}{1} = x = 4$$

- 4 What is the sum of $0.64 + (-\frac{124}{200})$?

$$0.64 = \frac{64}{100} \cdot \frac{2}{2} = \frac{128}{200} + \frac{-124}{200} = \frac{4}{200} \div 4 = \frac{1}{50}$$

- 5 It takes Carter $\frac{1}{4}$ hour to clean $\frac{3}{4}$ a room in his house. Plot a point on the graph to show the unit rate at which Carter cleans rooms in his house.



$\frac{y}{x} = \frac{\text{rooms}}{\text{hour}} = \frac{\frac{3}{4}}{\frac{1}{4}}$

$\frac{3}{4} \cdot \frac{4}{1} = 3 \text{ rooms per hour}$

$(1, 3)$

Tuesday, 2/25

1 Select the three side combination that will create a triangle. Select all that apply.

- A 8, 5, 10 $8+5 > 10$
- B 11, 7, 5 $5+7 > 11$
- C 4, 9, 5 $4+5 = 9$
- D 4, 7, 2 $4+2 < 7$

2 Solve for x:

$$\begin{aligned} 15 &= 5 - \frac{2}{5}x \\ -5 & -5 \\ 10 &= -\frac{2}{5}x \\ \frac{-2}{3} & \frac{-2}{3} \\ x &= -25 \end{aligned}$$

$$5 \cdot \frac{10}{1} \cdot \frac{-5}{2} = -25$$

3 What is the sum of $-2\frac{3}{4} + 4\frac{1}{2}$?

$$-2\frac{3}{4} + 4\frac{2}{4} = -2\frac{3}{4} + 3\frac{6}{4} = 1\frac{3}{4}$$

4 A cold front passes through one town between 10:00 A.M. and 5:00 P.M. one day. The temperature dropped by an average of 3.5°F per hour during this time period. The temperature at 5:00 P.M. was -10°F. What was the temperature, in degrees Fahrenheit, at 10:00 A.M. that morning before the temperature started to drop?

$$10\text{AM} \rightarrow 5\text{pm} = 7 \text{ hours } (3.5) = 24.5$$

$$\begin{aligned} x - 24.5 &= -10 \\ +24.5 & +24.5 \\ x &= 14.5^\circ \end{aligned}$$

Wednesday, 2/26

1 What is the value of x in the equation $(\frac{3}{5} + \frac{-5}{3}) + x = 0$?

$$\begin{aligned} \frac{9}{15} + \frac{-25}{15} &= \frac{-16}{15} + x = 0 \\ x &= \frac{16}{15} \end{aligned}$$

2 Simply the expression.

$$\begin{aligned} &2(x-5) - (4-x) \\ &2x - 10 - 4 + x \\ &3x - 14 \end{aligned}$$

3 Melissa is buying a pair of shoes. The original cost of the shoes is \$65.00. The shoes are 20% off, and sales tax is 7%. How much will the shoes cost?

$$65(.80) = 52(1.07) = \$55.64$$

Thursday, 2/27

- 1 A rectangle with the dimensions of 8 cm by 6 cm is enlarged by a scale factor of 2.5. What will be the perimeter of the enlarged rectangle?

$$\begin{aligned} P &= 2(8) + 2(6) \\ &= 16 + 12 \\ &= 28 \\ 28(2.5) &= 70 \text{ cm} \end{aligned}$$

- 2 A circle has a diameter of 6.4. What is the area of the circle in terms of pi?

$$\begin{aligned} r &= \frac{d}{2} = \frac{6.4}{2} = 3.2 & A &= \pi r^2 \\ & & &= 3.2^2 \pi \\ & & &= 10.24 \pi \end{aligned}$$

- 3 What is the mean of the data below?

Sum = 77 8, 12, 16, 9, 11, 8, 13

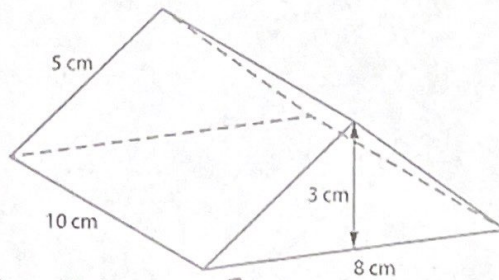
$$77 \div 7 = 11$$

Friday, 2/28

- 1 What is the volume and surface area of the figure below?

Volume =

$$B = \frac{3(8)}{2} = 12$$
$$h = 10$$



$$V = 12(10) = 120 \text{ cm}^3$$

- 2 Convert $\frac{7}{15}$ to a decimal.

$$\begin{array}{r} .4\bar{6} \\ 15 \overline{) 7.00} \\ \underline{-60} \\ 100 \\ \underline{-90} \\ 10 \end{array} \quad 0.4\bar{6}$$

- 3 On a map, the distance between two cities is $2\frac{3}{4}$ inches. The scale on the map is $\frac{1}{4} \text{ in} = 3 \text{ mi}$. What is the actual distance between the two cities?

$$\frac{\frac{1}{4}}{3 \text{ mi}} = \frac{2\frac{3}{4}}{x} \quad \frac{\frac{1}{4} x}{\frac{1}{4}} = \frac{8\frac{1}{4}}{\frac{1}{4}} \quad x = 33 \text{ mi}$$

- 4 Thomas collects baseball cards. He has 12 cards from the Cubs, 20 cards from the Reds, 18 cards from the Dodgers, and 10 cards from the Phillies. If he places these cards in a bag, what is the probability he will randomly pick a card from the Cubs or Reds?

$$\begin{aligned} \text{total cards} &= 60 & \frac{32}{60} \div 4 &= \frac{8}{15} \\ \text{Cubs or reds} &= 32 & & \end{aligned}$$

MGM February 24th

7. NS. 2A 1 POINT

1 Select all the expressions that have positive products.

A $(-5)(11)(3)(21)$

B $(-\frac{3}{4})(-\frac{5}{6})(-\frac{7}{8})(-\frac{9}{10})$

C $(-\frac{1}{4})(-\frac{5}{8})(\frac{2}{13})$

D $(-1.2)(8.4)(-6.3)$

E $(4.5)(6.7)(2.3)(9.1)$

7. NS. 2A 1 POINT

2 Which expressions are equivalent to $-7 \times \frac{1}{-4}$. Select each correct answer.

A $\frac{(1)(-7)}{(-4)(2)} = -\frac{7}{8}$

$-\frac{7}{-4} = \frac{7}{4}$

B $7 \times \frac{-1}{-4}$

C $7 \times -\frac{1}{4}$

D $7 \times \frac{1}{4}$

E $7 \times 1 \times \frac{1}{-4}$

7. G. 1 1 POINT

3 Ryan made a scale drawing of a square park, which has a side length of 72 yards. He used the scale 2 cm = 9 yd.

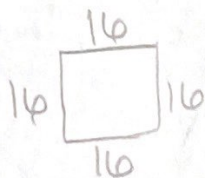
What will be the perimeter of the scale drawing?

A 16 cm^2

B 64 cm^2

C 128 cm^2

D 256 cm^2



$$\begin{aligned} \frac{2 \text{ cm}}{9 \text{ yd}} &= \frac{x}{72} \\ 9x &= 144 \\ \frac{9x}{9} &= \frac{144}{9} \\ x &= 16 \end{aligned}$$

7. G. 1 1 POINT

4 A scale drawing of a piece of land is shown. The land is in the shape of a trapezoid with parallel sides which are perpendicular to the road.

The scale for the drawing is $\frac{1}{2}$ inch = 25 feet. Approximately what is the area of the land?

A $22,500 \text{ ft}^2$

B $45,000 \text{ ft}^2$

C $90,000 \text{ ft}^2$

D $150,000 \text{ ft}^2$

$\frac{1}{2} \text{ in} = 25 \text{ ft}$
 $1 \text{ in} = 50 \text{ ft}$

$$\frac{150 + 250}{2} \cdot 225 = 225$$

$$\frac{2}{200} = 225$$

