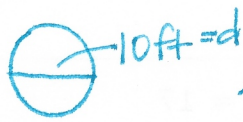
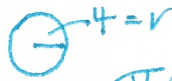


1. A PE teacher drew two circles outside the gym for a class activity. One of the circles had a diameter of 10 feet. The other circle had a radius of 4 feet. How much larger was the area of the first circle than the area of the second circle?



$$\begin{aligned} \pi r^2 \\ \pi \cdot 5^2 \\ \pi \cdot 25 \\ 78.5 \text{ ft}^2 \end{aligned}$$



$$\begin{aligned} \pi r^2 \\ \pi \cdot 4^2 \\ \pi \cdot 16 \\ 50.24 \text{ ft}^2 \end{aligned}$$

Area = πr^2

$$78.5 - 50.24 = \boxed{28.26 \text{ ft}^2}$$

2. Triangle RPQ is similar to Triangle TRS. What is the length of line segment TR?

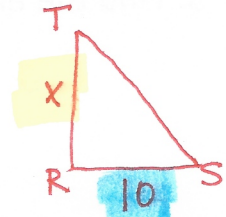
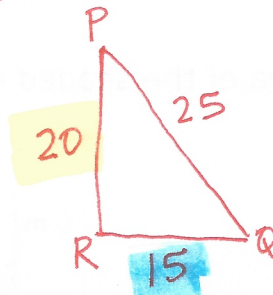
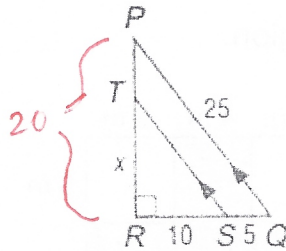
**Draw individual triangles first!!*

$$\frac{20}{15} = \frac{x}{10}$$

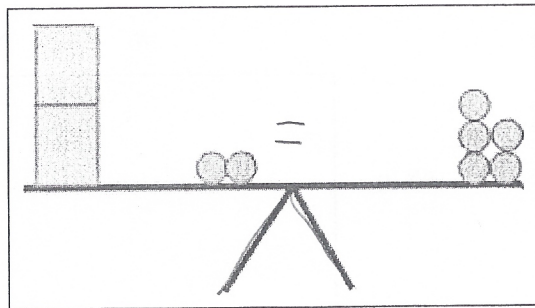
simplify & cross multiply!

$$\frac{4}{3} = \frac{x}{10} \quad \begin{array}{r} 13\frac{1}{3} \\ 3 \overline{)40} \\ \underline{-3} \\ 10 \\ \underline{-9} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

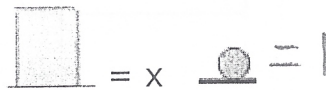
$$\boxed{x = 13\frac{1}{3}}$$



3. What is the value of x in the equation that would represent the balance below?



$$\boxed{x = 1.5 \text{ or } 1\frac{1}{2}}$$



$$\begin{aligned} 2x + 2 &= 5 \\ \underline{-2} \quad \underline{-2} & \\ 2x &= 3 \\ \underline{} \quad \underline{} & \\ x &= 1\frac{1}{2} \end{aligned}$$

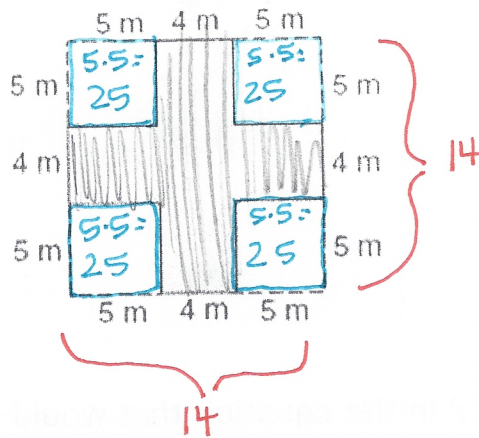
W

4. Solve each equation below.

$4x - 8 = 2$ $\begin{array}{r} +8 \quad +8 \\ \hline 4x = 10 \\ \frac{4x}{4} = \frac{10}{4} \end{array}$ $x = 2.5$	$5 - 2x = -17$ $\begin{array}{r} -5 \quad -5 \\ \hline -2x = -22 \\ \frac{-2x}{-2} = \frac{-22}{-2} \end{array}$ $x = 11$
$15 - 2x = 12.4$ $\begin{array}{r} -15 \quad -15 \\ \hline -2x = -2.6 \\ \frac{-2x}{-2} = \frac{-2.6}{-2} \end{array}$ $x = 1.3$	$\frac{x}{3} + 5 = 17$ $\begin{array}{r} 3 \quad -5 \quad -5 \\ \hline \end{array}$ $(3) \frac{x}{3} = 12(3)$ $x = 36$

5. Find the area of the shaded region.

$96m^2$



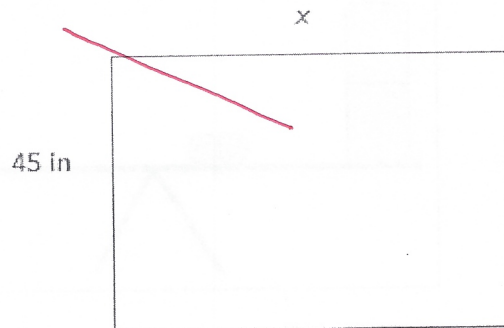
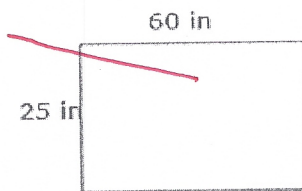
Area of entire square
 $14 \times 14 = 196$

$25 \times 4 = 100$
 ↑
 area of 4 smaller squares

$$\begin{array}{r} 196 \\ -100 \\ \hline 96m^2 \end{array}$$

6.

The rectangles below are similar.



What is the length of x?

$$\frac{60}{25} = \frac{x}{45}$$

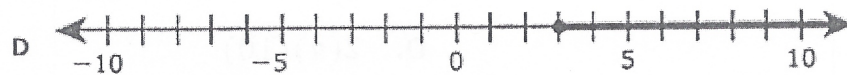
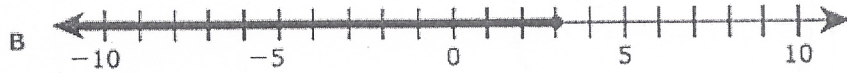
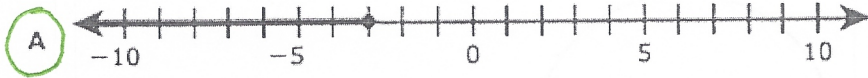
$$\frac{12}{5} = \frac{x}{45}$$

x9

$x = 108$

7.

Which number line represents the solution to the inequality $-7x - 13 \geq 8$?

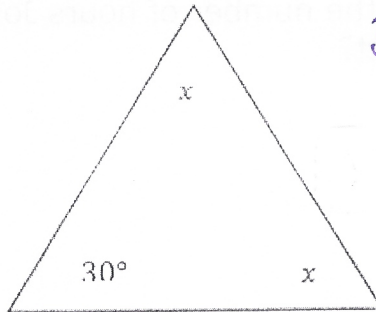


$$\begin{array}{r} -7x - 13 \geq 8 \\ +13 \quad +13 \\ \hline -7x \geq 21 \\ \frac{-7x}{-7} \geq \frac{21}{-7} \end{array}$$

$x \leq -3$

8.

Look at the triangle below. What is the value of x?



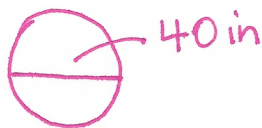
$$30 + x + x = 180$$

$$\begin{array}{r} 30 + 2x = 180 \\ -30 \quad -30 \\ \hline 2x = 150 \end{array}$$

$$\frac{2x}{2} = \frac{150}{2}$$

$x = 75$

9. A hula hoop has a diameter of approximately 40 inches. What is the circumference of this hula hoop?



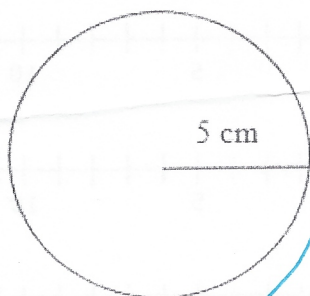
$$\text{Circumference} = \pi \cdot d \quad \pi = 3.14$$

$$\pi \cdot 40$$

125.6 in

$$\begin{array}{r} 3.14 \\ \times 40 \\ \hline 000 \\ 12560 \\ \hline 125.60 \end{array}$$

10.

Which expression represents the circumference of the circle below?

$$C = 2\pi r$$

$$C = 2 \cdot \pi \cdot 5$$

$$C = \pi \cdot 10$$

A. $2(\pi)(5)$

B. $\pi(5)$

C. $2(5)$

D. $2(\pi)(10)$

11. John is having a new deck built. He paid \$485 for the required materials, and will pay his brother \$25 an hour to build the deck. Which equation shows the relationship between h , the number of hours John's brother works, and c , the cost of the project?

A. $c = 485h + 25$ h is in wrong spot

B. $c = 25h + 485$

C. $c = 25 + 485$ no h

D. $c = 25h$ no 485

$$C = 485 + 25h$$