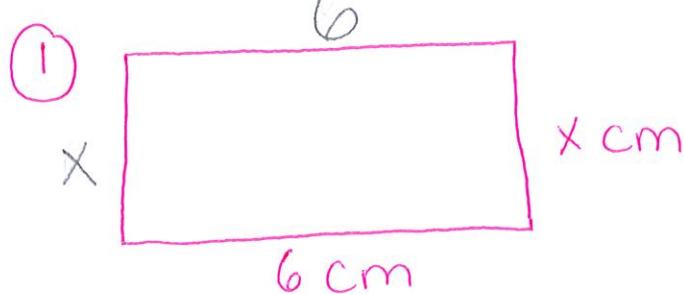


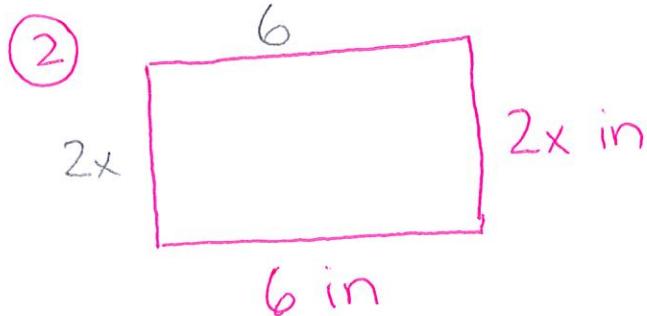
Pg. 17 (Practice A)



$$\text{Area} = 6x$$

Perimeter

$$\begin{aligned}
 & 6 + 6 + \cancel{x} + \cancel{x} = 6x \\
 & 12 + 2x = 6x \\
 & -2x \quad -2x \\
 \hline
 & 12 = 4x \\
 & \frac{12}{4} = \frac{4x}{4} \\
 & x = 3
 \end{aligned}$$



$$\text{Area} = 6 \cdot 2x = 12x$$

$$\text{Perimeter} = 6 + 6 + 2x + 2x$$

$$\begin{aligned}
 & 6 + 6 + \cancel{2x} + \cancel{2x} = 12x \\
 & 12 + 4x = 12x
 \end{aligned}$$

$$\begin{aligned}
 & 12 + 4x = 12x \\
 & -4x \quad -4x \\
 \hline
 & \frac{12}{8} = \frac{8x}{8}
 \end{aligned}$$

③

$$\begin{array}{r}
 y - 12 = 4y \\
 -y \quad -y \\
 \hline
 -12 = \frac{3y}{3} \quad (\text{bring } y \text{ to } 4y)
 \end{array}$$

$y = -4$

④

$$\begin{array}{r}
 6n - 12 = n + 3 \\
 -n \quad +12 - n \quad +12 \\
 \hline
 \frac{5n}{5} = \frac{15}{5}
 \end{array}$$

$n = 3$

⑤

$$\begin{array}{r}
 \frac{1}{5}q = q - \frac{2}{5}q \\
 + \frac{2}{5}q \quad + \frac{2}{5}q \quad (\text{put } q's \text{ together})
 \end{array}$$

$$\begin{array}{r}
 \frac{3}{5}q = \frac{9}{3} \\
 \frac{3}{5} \quad \frac{3}{5}
 \end{array}$$

$$q = \frac{9}{1} \div \frac{3}{5}$$

$$\frac{9}{1} \times \frac{5}{3} = \frac{45}{3}$$

$q = 15$

$x = \frac{12}{8}$ or $1\frac{4}{8}$ or 1.5

$$\begin{array}{r} \textcircled{6} \quad 4.3d + 7.5 = 5.8d \\ -4.3d \qquad \qquad \qquad -4.3d \\ \hline \frac{7.5}{1.5} = \frac{1.5d}{1.5} \\ d = 5 \end{array}$$

$$\begin{array}{r} \textcircled{7} \quad 6(h+4) = -2h \quad (\text{distributive property}) \\ 6h + 24 = -2h \\ -6h \qquad \qquad \qquad -6h \\ \hline \frac{24}{-8} = \frac{-8h}{-8} \\ h = -3 \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad 3(b-4) = 5b - 2 \quad (\text{distributive property}) \\ 3b - 12 = 5b - 2 \\ -3b + 2 \qquad -3b + 2 \\ \hline \frac{-10}{2} = \frac{2b}{2} \\ b = -5 \end{array}$$

$$\begin{array}{r} \textcircled{9} \quad 15 + .25x = 20 + .5x \\ \text{A} \qquad \qquad \qquad \text{B} \end{array}$$

set them equal to one another to find out when the # of minutes (x) will make both plans the same price

$$\begin{array}{r} 15 + .25x = 20 + .5x \\ -15 \qquad \qquad \qquad -15 - .5x \\ \hline .25x = \frac{5}{.25} \end{array}$$

\textcircled{10} One third of a number x is equal to 22 less than the number. Write and solve an equation to find the number.

$$\frac{1}{3}x = x - 22$$

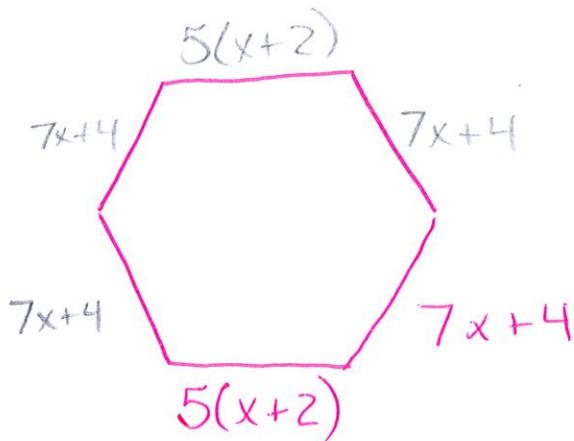
$$\begin{aligned} \frac{1}{3}x &= x - 22 \\ -x & \\ -\frac{3}{3}x & (-1x) \\ &\downarrow \\ &\text{change} \\ -\frac{3}{3}x & \end{aligned}$$

$$\begin{aligned} -\frac{2}{3}x &= -22 \\ \frac{-2}{3} & \qquad \qquad \frac{-2}{3} \\ \hline \end{aligned}$$

$$\begin{aligned} -22 \div -\frac{2}{3} & \\ \frac{-22}{1} \times \frac{3}{2} &= \frac{-66}{2} \end{aligned}$$

$$x = -33$$

(11)



Perimeter = all sides added together

$$\begin{aligned} & \widehat{5(x+2)} + 5(x+2) + 7x+4 + 7x+4 + 7x+4 + 7x+4 \\ & 5x+10 + 5x+10 + 28x+16 \\ & \underline{\underline{38x+36}} \end{aligned}$$

(12) 60% of the original price P .

$$\begin{array}{rcl} .60P = P - 32 & & \\ \nearrow & \nwarrow & \\ \text{write \% as} & & \text{32 less} \\ \text{a decimal} & & \text{than original} \\ & & \text{price} \end{array}$$

$$\begin{array}{rcl} .60P = P - 32 & & \\ - P \quad -P & & \\ \hline -.40P = -.32 & & \\ -.40 \quad -.40 & & \end{array}$$

$$P = \$80$$

$$\begin{array}{rcl} \textcircled{13} & 8x + 3 = 8x \\ & -8x & -8x \\ \hline & 3 = 0x \end{array}$$

No solution

Impossible, a
solution doesn't exist

$$\begin{array}{rcl} \textcircled{14} & -25(10-x) = 25x + 250 \\ & -250 + 25x = 25x + 250 \\ & +250 & +250 \\ \hline & 25x = 25x + 500 \\ & -25x & -25x \\ \hline & 0x = 500 \end{array}$$

No solution

*we will review
13-16 in class

$$\textcircled{15} \quad x + 1 = x + 1$$

Both sides are
equal, so ANY solution
(Infinite Solutions)

$$\textcircled{16} \quad 6(2x+4) = 4(3x+6)$$

$$12x + 24 = 12x + 24$$

$$\begin{array}{rcl} \textcircled{17} & x + 2 = 5x \\ & -x & -x \\ \hline & 2 = 4x \\ & \frac{2}{4} & \frac{4}{4} \end{array}$$

$$x = \frac{2}{4} \text{ or } \frac{1}{2}$$

$$\textcircled{18} \quad 5x + 2 - x = -4x$$

$$\begin{array}{rcl} 4x + 2 & = & -4x \\ -4x & & -4x \\ \hline \end{array}$$

$$\begin{array}{rcl} 2 & = & -8x \\ \frac{2}{-8} & & \frac{-8}{-8} \end{array}$$

$$x = -\frac{1}{4}$$

Pg. 14

$$\textcircled{1} \quad 8 - 3x = 17$$
$$\begin{array}{r} -8 \\ \hline -3x = 9 \end{array}$$
$$\begin{array}{r} -3 \\ \hline x = -3 \end{array}$$

$$\textcircled{2} \quad 5a - 6 - 2a = 12$$
$$\begin{array}{r} 3a - 6 = 12 \\ +6 +6 \\ \hline 3a = 18 \end{array}$$
$$a = 6$$

$$\textcircled{3} \quad 4.3t - 2.1t - 2.3 = 7.6$$
$$\begin{array}{r} 2.2t - 2.3 = 7.6 \\ +2.3 +2.3 \\ \hline 2.2t = 9.9 \end{array}$$
$$t = 4.5$$

$$\textcircled{3} \quad 4.3t - 2.1t - 2.3 = 7.6$$
$$\textcircled{4} \quad 8.1 + 3.8h - 5.6h = -7.2$$
$$\begin{array}{r} 8.1 - 1.8h = -7.2 \\ -8.1 -8.1 \\ \hline -1.8h = -15.3 \\ -1.8 -1.8 \\ h = 8.5 \end{array}$$

$$\textcircled{5} \quad \frac{2}{5}c + 4 - \frac{1}{5}c = -9$$
$$\begin{array}{r} \frac{1}{5}c + 4 = -9 \\ -4 -4 \\ \hline \frac{1}{5}c \quad \frac{-13}{5} \end{array}$$
$$c = -\frac{13}{5} \times \frac{5}{1} = -\frac{65}{1} = -65$$

$$\textcircled{6} \quad 2(45 - 16) - 5s = -5$$

$$85 - 32 - 5s = -5$$

$$\begin{array}{r} 35 - 32 = -5 \\ +32 \quad +32 \\ \hline 3s = 27 \end{array}$$

$$\frac{3s}{3} = \frac{27}{3}$$

$$\boxed{s=9}$$

$$\textcircled{7} \quad 3g - 6(g-8) = 42$$

$$3g - 6g + 48 = 42$$

$$\begin{array}{r} -3g + 48 = 42 \\ -48 \quad -48 \\ \hline -3g = -6 \end{array}$$

$$\frac{-3g}{-3} = \frac{-6}{-3}$$

$$\boxed{g=2}$$

$$\textcircled{8} \quad 1.3(8 - b) + 3.7b = -5.2$$

$$10.4 - 1.3b + 3.7b = -5.2$$

$$\begin{array}{r} 10.4 + 2.4b = -5.2 \\ -10.4 \quad -10.4 \\ \hline 2.4b = -15.6 \end{array}$$

$$\frac{2.4b}{2.4} = \frac{-15.6}{2.4}$$

$$\boxed{b=-6.5}$$

$$\textcircled{9} \quad \text{Average} = \frac{\text{total minutes}}{\text{total months}}$$

$$\frac{43 + 62 + 57 + x}{4} = 55$$

$$\frac{162 + x}{4} = 55$$

* Multiply both sides by 4 to cancel the fraction out.

$$4 \left(\frac{162 + x}{4} = 55 \right)$$

$$4(162 + x) = 55 \times 4$$

$$\begin{array}{r} 162 + x = 220 \\ -162 \quad -162 \\ \hline x = 58 \end{array}$$

\textcircled{10} Sum of angles in a triangle = 180°

$$3x + 2x + 20 + 4x - 20 = 180$$

~~90 90 180 90 90~~

$$9x + 0 = 180$$

$$\frac{9x}{9} = \frac{180}{9}$$

$$\boxed{x=20}$$

⑪ If half = \$3.60, then total = \$7.20
bill
w/ tip

If Smoothies only cost \$6 together,
then you left \$1.20 tip, since the
total bill w/ tip is \$7.20

$$\begin{array}{r} 6 + \text{total} \\ \uparrow \quad \uparrow \\ 6(x) \text{ tip} \end{array} = 7.20$$

$$\begin{array}{r} 6 + 6x = 7.20 \\ -6 \quad -6 \\ \hline 6x = 1.20 \\ \hline 6 \end{array}$$

$$x = .2 \quad (\text{move the decimal 2 spots to the right to change to a \%})$$

~~20%~~