

Homework

Perimeter Word Problems

Created for you by Mrs. Whetseubach

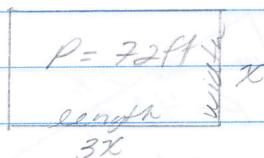
Name: _____

Algebra 1 H – Period: _____

Date: Sept. 25

Glue on page 24, use pages 25 & 26 to show work.

1.)



$$P = 2L + 2W$$

$$72 = 2(3x) + 2x$$

$$72 = 6x + 2x$$

$$72 = 8x$$

$$\frac{72}{8} = \frac{8x}{8}$$

$$x = 9$$

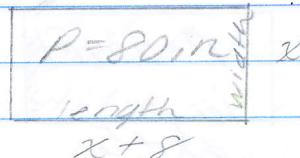
$$3 \times \text{length} \\ 3(9) = 27$$

ans:

$$\text{width} = 9 \text{ ft}$$

$$\text{length} = 27 \text{ ft}$$

2.)



$$P = 2L + 2W$$

$$80 = 2(x + 8) + 2x$$

$$80 = 2x + 16 + 2x$$

$$80 = 4x + 16$$

$$\frac{-16}{4} = \frac{-16}{4}$$

$$64 = 4x$$

$$\frac{64}{4} = \frac{4x}{4}$$

$$x = 16$$

length

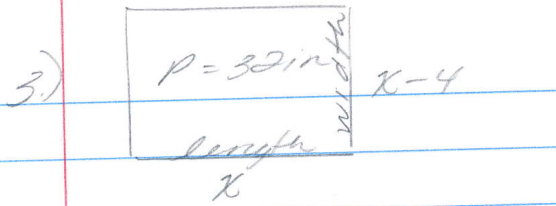
$$x + 8$$

$$16 + 8 = 24$$

ans:

$$\text{width} = 16 \text{ in}$$

$$\text{length} = 24 \text{ in}$$



$$P = 2l + 2w$$

$$32 = 2(x) + 2(x-4)$$

$$32 = 2x + 2x - 8$$

$$32 = 4x - 8$$

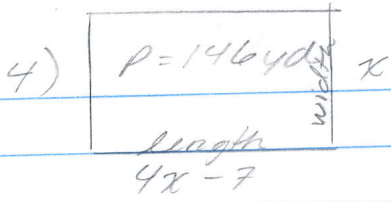
$$\begin{array}{r} +8 \quad +8 \\ \hline 40 = 4x \\ 4 \quad 4 \end{array}$$

width

$$x = 10 \quad \begin{array}{l} x - 4 \\ 10 - 4 = 6 \end{array}$$

ans:

width = 6 in
length = 10 in



$$P = 2l + 2w$$

$$146 = 2(4x-7) + 2x$$

$$146 = 8x - 14 + 2x$$

$$146 = 10x - 14$$

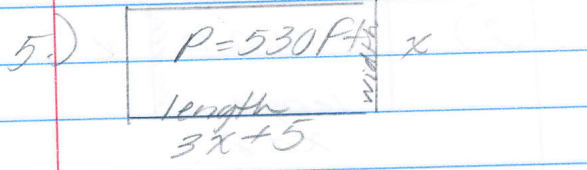
$$\begin{array}{r} +14 \quad +14 \\ \hline 160 = 10x \\ 10 \quad 10 \end{array}$$

length

$$16 = x \quad \begin{array}{l} 4x - 7 \\ 4(16) - 7 = 57 \end{array}$$

ans:

width = 16 yd
length = 57 yd



$$P = 2l + 2w$$

$$530 = 2(3x+5) + 2x$$

$$530 = 6x + 10 + 2x$$

$$530 = 8x + 10$$

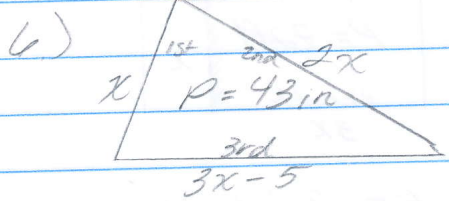
$$\begin{array}{r} -10 \quad -10 \\ \hline 520 = 8x \\ 8 \quad 8 \end{array}$$

length

$$x = 65 \quad 3(65) + 5$$

ans:

width = 65 ft
length = 200 ft



$$P = s + s + s$$

$$43 = x + 2x + 3x - 5$$

$$43 = 6x - 5$$

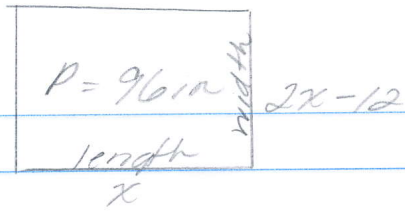
$$\begin{array}{r} +5 \quad +5 \\ \hline 48 = 6x \\ 6 \quad 6 \end{array}$$

$$x = 8$$

ans:

1st side = 8 in
2nd side = 2(8) = 16 in
3rd side = 3(8) - 5 = 19 in

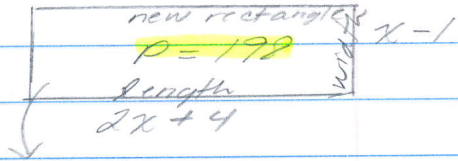
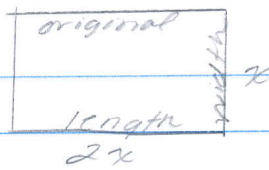
7.)



$$\begin{aligned}
 P &= 2l + 2w \\
 96 &= 2x + 2(2x-12) \\
 96 &= 2x + 4x - 24 \\
 96 &= 6x - 24 \\
 +24 & \quad +24 \\
 \hline
 120 &= 6x \\
 6 & \quad 6 \quad \text{width} \\
 x &= 20 \quad 2(20) - 12 = 28
 \end{aligned}$$

ans:
 length = 20 in
 width = 28 in

8.)



$$\begin{aligned}
 P &= 2l + 2w \\
 198 &= 2(2x+4) + 2(x-1) \\
 198 &= 4x + 8 + 2x - 2 \\
 198 &= 6x + 6 \\
 -6 & \quad -6 \\
 \hline
 192 &= 6x \\
 6 & \quad 6
 \end{aligned}$$

$x = 32 \text{ in}$
 ans:
 original rectangle
 width = 32 in
 length = $2(32) = 64 \text{ in}$