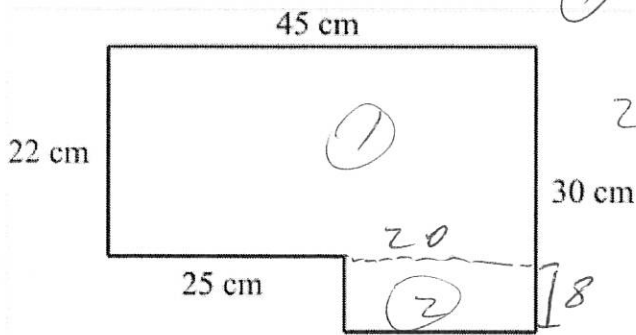


10. Find the area of the figure



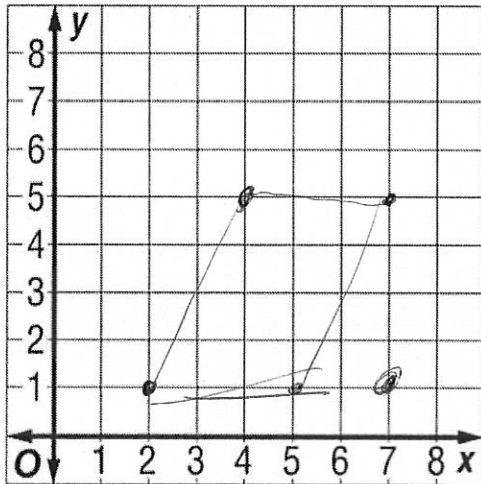
① $22 \times 45 = 990$

② $8 \times 20 = 160$

1150 cm^2

11. A figure has vertices $W(2, 1)$, $X(4, 5)$, $Y(7, 5)$, and $Z(5, 1)$.

a. Graph the figure and state what type of a figure it is



parallelogram

b. Find the area of the figure

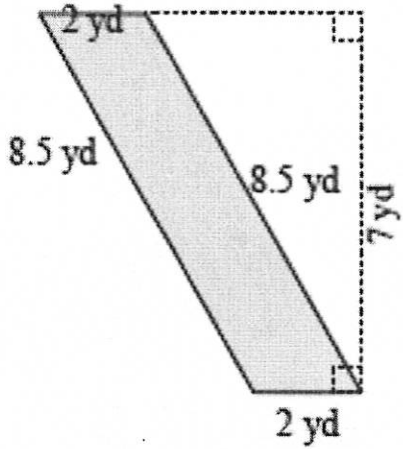
$A = bh$

$= (3 \times 4)$

$A = 12 \text{ units}^2$

Chapter 9 Practice Test

Find the area of each figure

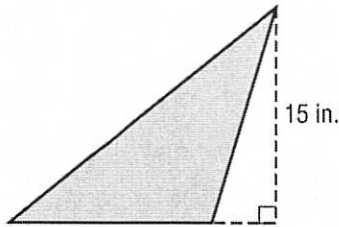


$$A = bh$$

$$A = (2)(7)$$

$$A = 14 \text{ yd}^2$$

1.

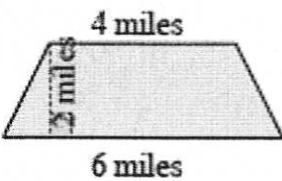


$$A = \frac{1}{2}bh$$

$$= \frac{1}{2} \left(\frac{37}{2} \right) (15) = \frac{555}{4} \text{ or } 138 \frac{3}{4} \text{ in.}^2$$

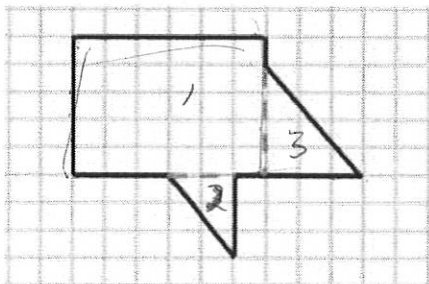
2.

$18 \times 2 = 36 + 1 = 37$



$$A = \frac{1}{2}(4+6)(2) = \frac{1}{2}(10)(2) = (5)(2) = 10 \text{ miles}^2$$

3.

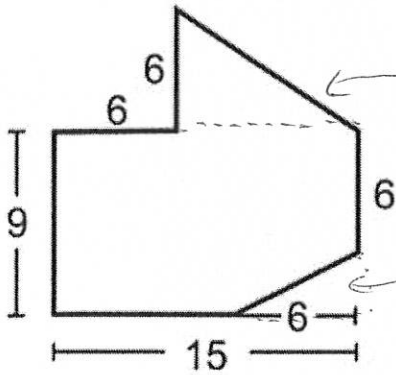


$$\begin{aligned} (1) & 6 \times 5 = 30 \text{ units}^2 \\ (2) & \frac{1}{2}(2)(3) = 3 \text{ units}^2 \\ (3) & \frac{1}{2}(2)(4) = 4 \text{ units}^2 \end{aligned} \left. \vphantom{\begin{aligned} (1) \\ (2) \\ (3) \end{aligned}} \right\} \text{ add!}$$

4.

$$37 \text{ units}^2$$

5. The figure below shows the dimensions of the local dog park. What is the area of the dog park?



sample answer:

rectangle (full): $9 \times 15 = 135$ } add!

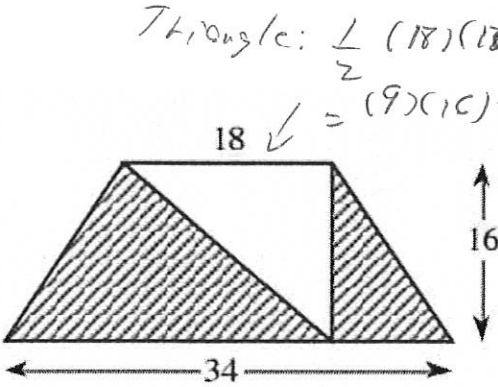
Triangle: $\frac{1}{2} (6)(6) = 9 \times 3 = 27$ }

$135 + 27 = 162 \text{ units}^2$

hole: $\frac{1}{2} (3)(6) = (\frac{3}{2})(6) = \frac{18}{2} = 9 \text{ units}^2$ } subtract!

153 units²

6. Find the area of the shaded region



Triangle: $\frac{1}{2} (18)(16) = (9)(16) = 144$

$\frac{1}{2} (18+34)(16) = (52)(8) = 416 \text{ units}^2$

Trapezoid (full)

416

- 144

272 units²

7. A triangle has a base of 35 feet and an area of 385 square feet. What is the height of the triangle?

$A = \frac{1}{2} bh$

$385 = \frac{1}{2} (35)(h)$ * multiply both sides by 2...

$770 = 35h$

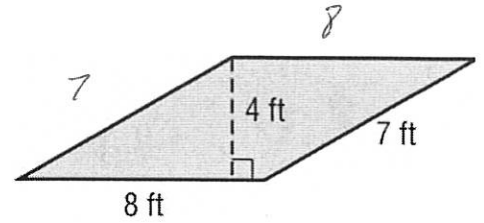
* divide by 35...

$22 = h$

8. Suppose the base, height, and sides of the parallelogram are multiplied by 5.

a. Find its original parameter and the new parameter.

$$\begin{array}{l}
 \text{original:} \\
 P = 8 + 7 + 8 + 7 \\
 = 15 + 14 \\
 = 30
 \end{array}
 \left.
 \begin{array}{l}
 \text{New} \\
 P = 40 + 35 + 40 + 35 \\
 = 80 + 70 \\
 = 150
 \end{array}
 \right\}$$



b. Find its original area and the new area.

$$\begin{array}{l}
 \text{original:} \\
 8 \times 4 = 32
 \end{array}
 \left.
 \begin{array}{l}
 \text{New:} \\
 \cancel{40} \times \cancel{20} = 800 \\
 40 \times 20 = 800
 \end{array}
 \right)$$

c. How are the values of the old and new parameters different? Briefly explain
How are the values of the old and new area different? Briefly explain

Parameter

$$\frac{150}{30} = 5 \text{ times bigger}$$

Area:

$$\frac{800}{32} = 25 \text{ times bigger}$$

9. Find the base of a parallelogram with height 17 yards and an area of 255 square yards.

$$\begin{array}{l}
 A = bb \\
 255 = 17b \\
 15 = b
 \end{array}
 \quad \text{divide by 17...}$$