

Guided Practice 13.2

NAME _____

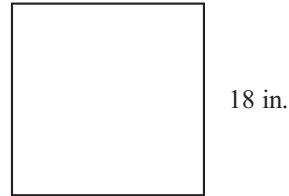
Module 13 Perimeter, Area, and Volume
Lesson 2 Area

Set 1

1 Find the area of the square.

$$\begin{aligned} A &= s^2 \\ A &= 18^2 \\ A &= 324 \end{aligned}$$

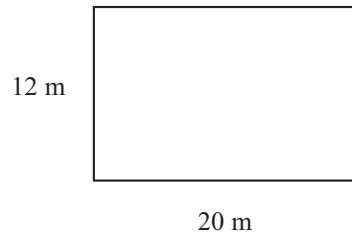
The area is 324 square inches.



2 Find the area of the rectangle.

$$\begin{aligned} A &= lw \\ A &= 12(20) = 240 \end{aligned}$$

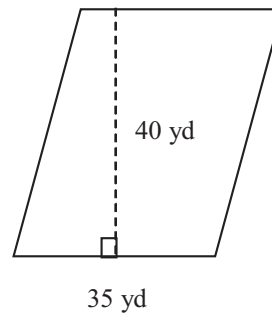
The area is 240 square meters.



3 Find the area of the parallelogram.

$$\begin{aligned} A &= bh \\ A &= 40(35) \\ A &= 1,400 \end{aligned}$$

The area is 1,400 square yards.

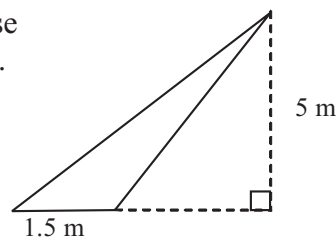


Set 2

1 Find the area of the triangle where the base is 1.5 meters and the height is five meters.

$$\begin{aligned} A &= \frac{1}{2}bh \\ A &= \frac{1}{2}(1.5)(5) = \frac{1}{2}(7.5) = 3.75 \end{aligned}$$

The area is 3.75 square meters.

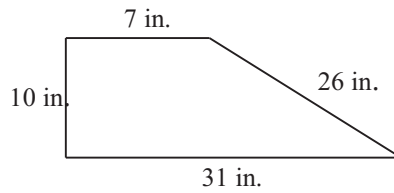


- 2 Find the area of the trapezoid.

$$A = \frac{1}{2}(b_1 + b_2)h$$

$$A = \frac{1}{2}(7 + 31)10 = \frac{1}{2}(38)10$$

$$A = 190$$



The area is 190 in².

- 3 Find the area of a circle whose diameter is 30 kilometers.

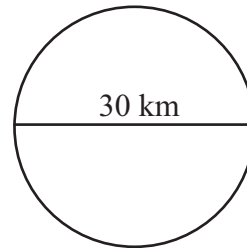
$$A = \pi r^2$$

$$A = \pi(15)^2$$

$$A = \pi 225$$

$$A \approx 3.14(225)$$

$$A \approx 707 \text{ km}^2$$



The area is about 707 km².

Set 3

- 1 The perimeter of a rectangle must be 18 feet. What whole number dimensions will give the least area and the greatest area?

Length (ft)	Width (ft)	P (ft)	A (ft ²)
1	8	18	8
2	7	18	14
3	6	18	18
4	5	18	20

Least area: 1 ft × 8 ft
Greatest area: 4 ft × 5 ft