Name _____ *Answers* _____ Date _____
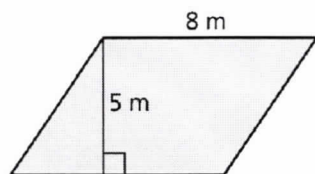
Geometry – Area of Parallelograms and Triangles

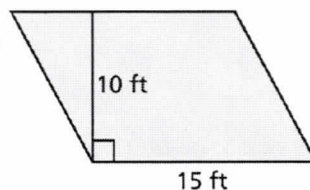Find the area of each polygon. Show all necessary work.

1)

8 m
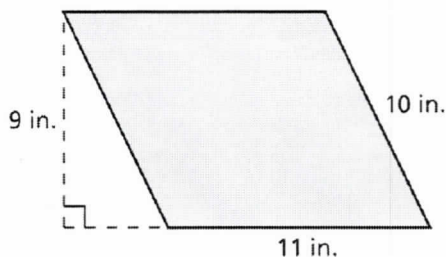5 m

$A = bh$
$= 8 \times 5$
$\boxed{= 40 m^2}$

2)

10 ft
15 ft

$A = bh$
$= 15 \times 10$
$\boxed{= 150 ft^2}$

3)

9 in.   10 in.
11 in.

$A = bh$
$= 11 \times 9$
$\boxed{= 99 in^2}$

4)

10 m
7 m

$A = bh$
$= 7 \times 10$
$\boxed{= 70 m^2}$

5)

50 in.
60 in.
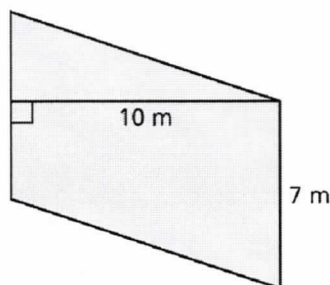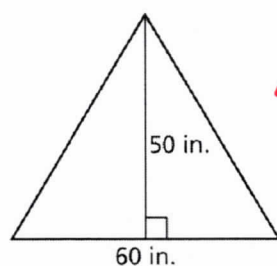
$A = \frac{1}{2} bh$
$= \frac{1}{2} \times 60 \times 50$
$= \frac{1}{2} \times 3000$
$\boxed{= 1500 in^2}$

6)

10 ft
45 ft
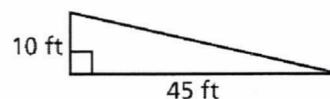
$A = \frac{1}{2} bh$
$= \frac{1}{2} \times 45 \times 10$
$= \frac{1}{2} \times 450$
$\boxed{= 225 ft^2}$

7)

42 m   5 m
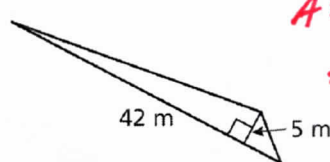
$A = \frac{1}{2} bh$
$= \frac{1}{2} \times 42 \times 5$
$= \frac{1}{2} \times 210$
$\boxed{= 105 m^2}$

8)

14 cm
14 cm
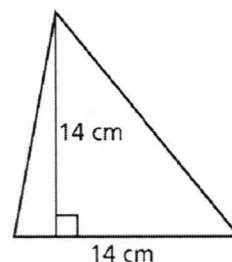
$A = \frac{1}{2} bh$
$= \frac{1}{2} \times 14 \times 14$
$= \frac{1}{2} \times 196$
$\boxed{= 98 cm^2}$

9)

9 m |

16 m
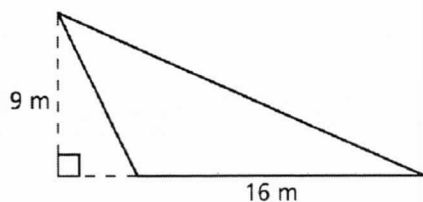
$$A = \frac{1}{2}bh$$
$$= \frac{1}{2} \times 16 \times 9$$
$$= \frac{1}{2} \times 144$$
$$= \boxed{72 m^2}$$

Complete the following.

10)

19 in.

22 in.

$$A = \frac{1}{2}bh$$
$$= \frac{1}{2} \times 22 \times 19$$
$$= \frac{1}{2} \times 418$$
$$= \boxed{209 in^2}$$

11) The area of a parallelogram is 54 m². What is the measure of its base if the height of it is 6 m.

$$A = bh$$
$$\frac{54}{6} = \frac{b \times 6}{6}$$
$$\boxed{9 m = b}$$

12) The area of a triangle is 54 m². What is the measure of its base if the height of it is 6 m.

$$A = \frac{1}{2}bh$$
$$54 = \frac{1}{2} \times b \times 6$$
$$\frac{54}{3} = \frac{3 \times b}{3}$$
$$\boxed{18 m^2 = b}$$

13) A sign is in the shape of a triangle with a base of 12 inches and a height of 8 inches. Find the area of the sign.

$$A = \frac{1}{2}bh$$
$$= \frac{1}{2} \times 12 \times 8$$
$$= \frac{1}{2} \times 96$$
$$= \boxed{48 in^2}$$

14) You live on a triangular piece of land with a base of 121 yards and a height of 80 yards. One acre of land is equal to 4840 square yards. Find the area of your piece of land in acres.

$$A = \frac{1}{2}bh$$
$$A = \frac{1}{2} \times 121 \times 80$$
$$A = \frac{1}{2} \times 9680$$
$$A = 4840 yd^2$$

$$\frac{4840}{4840} = \boxed{1 acre}$$