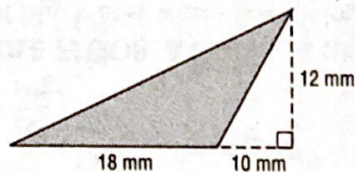## 11-1 Skills Practice

Areas of Parallelograms and Triangles
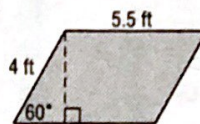
Find the perimeter and area of each parallelogram or triangle. Round to the nearest tenth if necessary.

1.
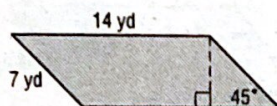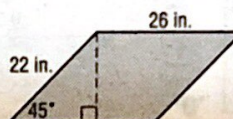
12 mm
18 mm   10 mm

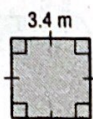**64.1 mm; 108 mm²**

2.

5.5 ft
4 ft
60°

19 ft, 19.1 ft²

3.

14 yd
7 yd
45°

42 yd; 69.3 yd²

4.

26 in.
22 in.
45°

96 in., 404.5 in²

5.

3.4 m

13.6 m; 11.6 m²

6.

18.5 km
9 km

55 km; 166.5 km²

7.

30 cm
60°
20 cm

100 cm; 519.6 cm²

8.

17 in.
13 in.   17 in.
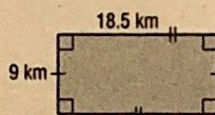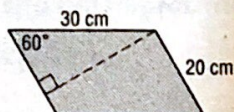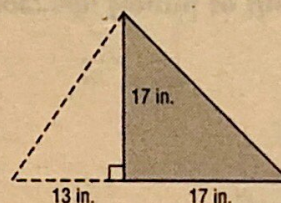
58 in; 144.5 in²

9. The height of a parallelogram is 10 feet more than its base. If the area of the parallelogram is 1200 square feet, find its base and height.
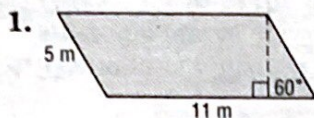
$b = 30$ ft; $h = 40$ ft

10. The base of a triangle is one half of its height. If the area of the triangle is 196 square millimeters, find its base and height.
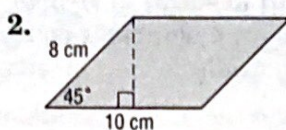
$b = 14$ mm; $h = 28$ mm

11-1 Practice

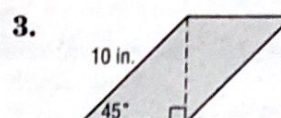## Areas of Parallelograms and Triangles

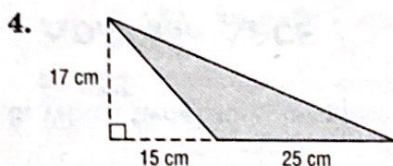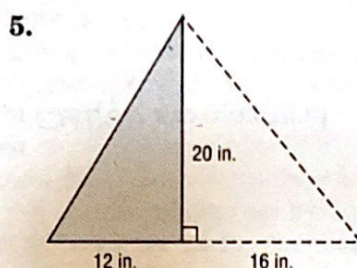Find the perimeter and area of each parallelogram or triangle. Round to the nearest tenth if necessary.

1.

5 m 60° 11 m

32 m; 47.6 m²

2.

8 cm 45° 10 cm

36 cm; 56.6 cm²

3.

10 in. 45°

34.1 in.; 50 in²

4.

17 cm 15 cm 25 cm

91.1 cm; 212.5 cm²

5.

20 in. 12 in. 16 in.

55.3 in.; 120 in²

6.

12.8 ft 8 ft 4 ft 6 ft
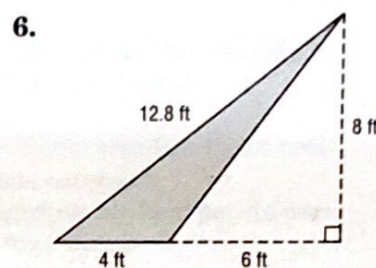
26.8 ft; 16 ft²

7. The height of a parallelogram is 5 feet more than its base. If the area of the parallelogram is 204 square feet, find its base and height.

$b = 12$ ft, $h = 17$ ft

8. The height of a parallelogram is three times its base. If the area of the parallelogram is 972 square inches, find its base and height.

$b = 18$ in., $h = 54$ in.

9. The base of a triangle is four times its height. If the area of the triangle is 242 square millimeters, find its base and height.

$b = 44$ mm; $h = 11$ mm

10. FRAMING A rectangular poster measures 42 inches by 26 inches. A frame shop fitted the poster with a half-inch mat border.

a. Find the area of the poster. **1092 in²**

b. Find the area of the mat border. **69 in²**

c. Suppose the wall is marked where the poster will hang. The marked area includes an additional 12-inch space around the poster and frame. Find the total wall area that has been marked for the poster. **3417 in²**