Practice
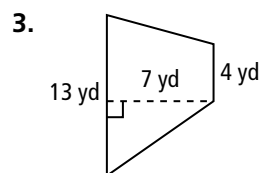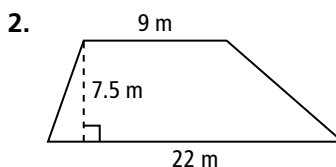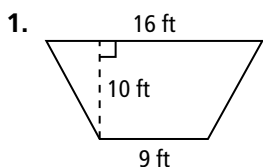
Form G

Areas of Trapezoids, Rhombuses, and Kites

Find the area of each trapezoid.

1.
16 ft
10 ft
9 ft

2.
9 m
7.5 m
22 m

3.
13 yd
7 yd
4 yd

4. Find the area of a trapezoid with bases 20 cm and 14 cm and height 5 cm.
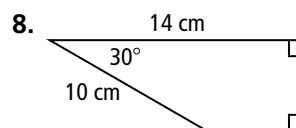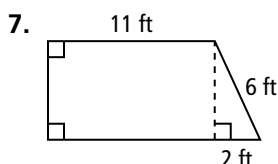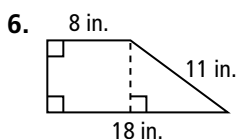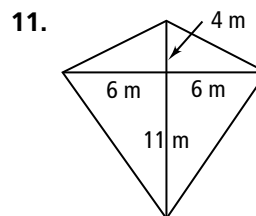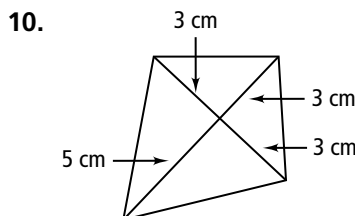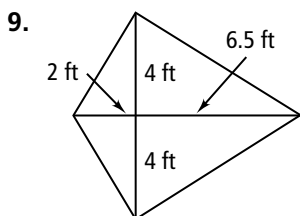
5. Find the area of a trapezoid with bases 8 in. and 7 in. and height 5.2 in.

**Find the area of each trapezoid. If your answer is not an integer, leave it in simplest radical form.**

6.
8 in.
11 in.
18 in.

7.
11 ft
6 ft
2 ft

8.
14 cm
30°
10 cm

Find the area of each kite.

9.
6.5 ft
2 ft
4 ft
4 ft

10.
3 cm
3 cm
3 cm
5 cm

11.
4 m
6 m   6 m
11 m

12. Find the area of a kite with diagonals 12 ft and 3 ft.

13. Find the area of a kite with diagonals 16 m and 14 m.

Find the area of each rhombus.

14.
25 ft
22 ft

15.
6 m
4 m

16.
8 in.
10 in.
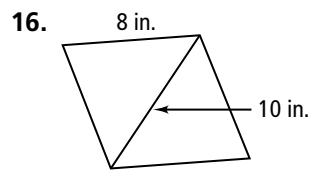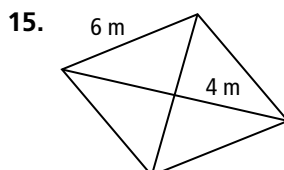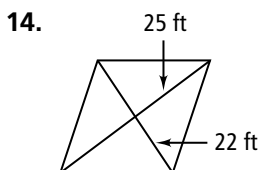
17. Find the area of a rhombus with diagonals 9 yd and 6 yd.

18. Find the area of a rhombus with diagonals 4.5 in. and 5.2 in.

19. Open-Ended Draw a rhombus. Measure the lengths of its diagonals. Find its area.
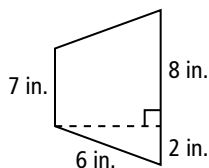
Practice (continued) Form G
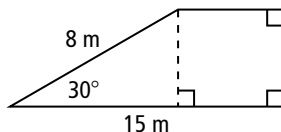
Areas of Trapezoids, Rhombuses, and Kites

20. A trapezoid has two right angles, 16 in. and 20 in. bases, and 5 in. height. Sketch the trapezoid and find its perimeter and area.

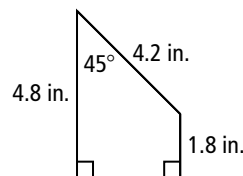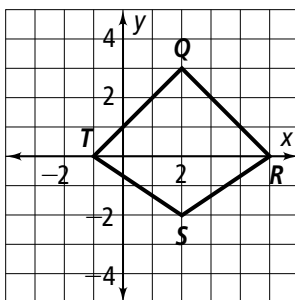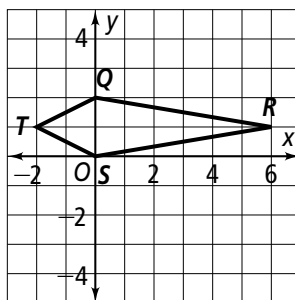**Find the area of each trapezoid to the nearest tenth.**

21.

7 in.   8 in.   6 in.   2 in.

22.

8 m   30°   15 m

23.

45°   4.2 in.   4.8 in.   1.8 in.

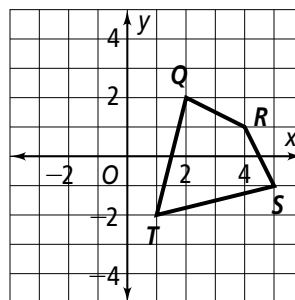**Coordinate Geometry** Find the area of quadrilateral *QRST*.

24.

25.

26.

27. Coordinate Geometry Graph the lines $y = x - 2$, $y = -x + 2$, $y = 2x - 10$, and $y = -2x - 2$. What type of quadrilateral do the lines form? Find the area of the quadrilateral.
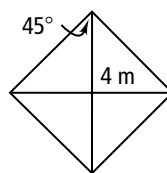
28. Algebra One diagonal of a rhombus is 5 less than twice the other diagonal. The area is 75 cm². Find the length of each diagonal.

Find the area of each rhombus. Leave your answer in simplest radical form.
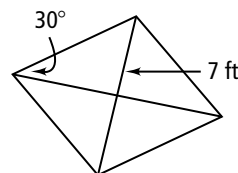
29.

6 ft   60°

30.

45°   4 m

31.

30°   7 ft
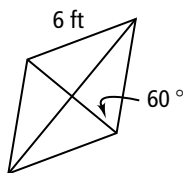
32. Trapezoid *QRST* has two right angles. A 5 in. altitude can be drawn dividing *QRST* into a rectangle and an isosceles right triangle. The longer side of the rectangle measures 9 in. What is the area of the trapezoid?

33. In isosceles trapezoid *EFGH*, $\overline{FG} \parallel \overline{EH}$, $FG = 10$, $GH = 12$, and $m\angle E = 60$. Find the area of *EFGH*.