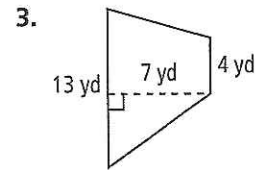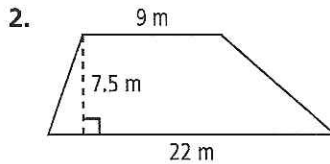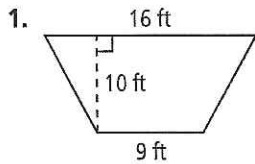# 10-2 Practice
Form G

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.

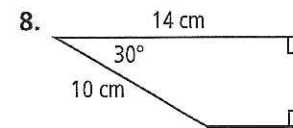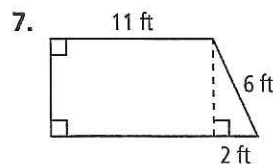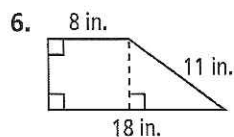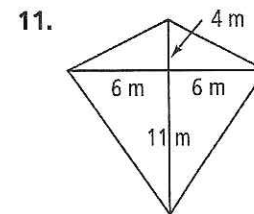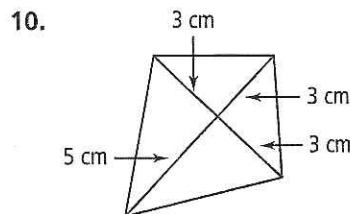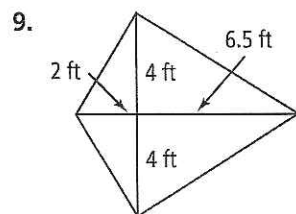**5.** Find the area of a trapezoid with bases 8 in. and 7 in. and height 5.2 in.

Find the area of each trapezoid. If your answer is not an integer, leave it in simplest radical form.
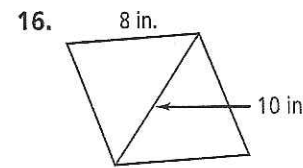
6.

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.

10-2 Practice   Form G

Areas of Trapezoids, Rhombuses, and Kites

Find the area of each trapezoid.

$A = \frac{1}{2}h(b_1 + b_2)$
$= \frac{1}{2}(7.5)(9+22)$
$= \frac{1}{2}(7.5)(31)$
$A = 116.25 m^2$

$A = \frac{1}{2}h(b_1 + b_2)$
$= \frac{1}{2}(7)(13+4)$
$= \frac{1}{2}(7)(17)$
$A = 59.5 yd^2$

1.
16 ft
10 ft
9 ft

$A = \frac{1}{2}h(b_1 + b_2)$
$= \frac{1}{2}(10)(16+9)$
$= \frac{1}{2}(10)(25)$
$= \frac{1}{2}(250)$
$A = 125 ft^2$

2.
9 m
7.5 m
22 m

3.
13 yd   7 yd   4 yd
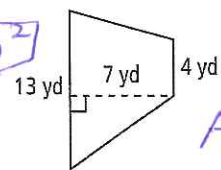
4. Find the area of a trapezoid with bases 20 cm and 14 cm and height 5 cm. $A = 85 cm^2$

5. Find the area of a trapezoid with bases 8 in. and 7 in. and height 5.2 in. $A = 39\ inch^2$

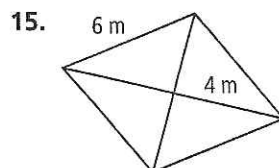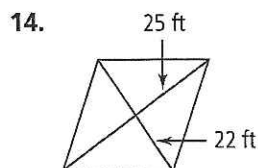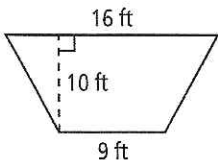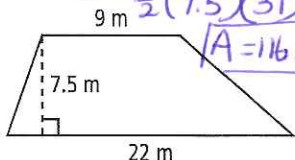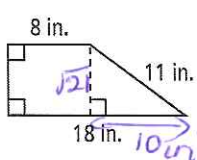**Find the area of each trapezoid. If your answer is not an integer, leave it in simplest radical form.**
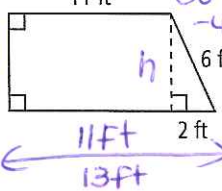
$A = \frac{1}{2}(4\sqrt{2})(11+13)$
$A = \frac{1}{2}(4\sqrt{2})(24)$
$A = 48\sqrt{2}\ ft^2$

$6^2 = h^2 + 2^2$
$36 = h^2 + 4$
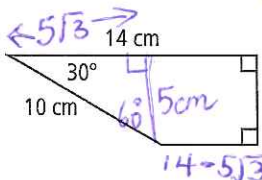$-4 \quad -4$
$32 = h^2$
$\sqrt{32} = h$
$h = \sqrt{32}$
$h = 4\sqrt{2}$

$A = \frac{1}{2}h(b_1 + b_2)$
$= \frac{1}{2}(5)(14 + 14 - 5\sqrt{3})$
$= \frac{1}{2}(5)(28 - 5\sqrt{3})$
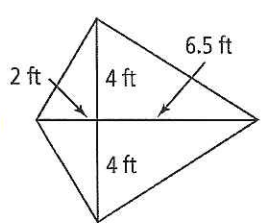$= 2.5(28 - 5\sqrt{3})$
$= (70 - \frac{25}{2}\sqrt{3})\ cm^2$

6.
8 in.
11 in.
18 in.   10 in

$A = \frac{1}{2}(\sqrt{21})(8+18)$
$= \frac{1}{2}(\sqrt{21})(26)$
$A = 13\sqrt{21}\ in^2$

7.
11 ft
6 ft
11 ft   2 ft
13 ft

8. 5√3   14 cm
30°
10 cm   5 cm
60°
14 - 5√3

Find the area of each kite.

9.
2 ft   4 ft   6.5 ft
4 ft

$A = \frac{1}{2}d_1 d_2$
$= \frac{1}{2}(8.5)(8)$
$A = 34\ ft^2$

10.
3 cm
3 cm
5 cm   3 cm

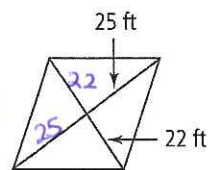$A = \frac{1}{2}d_1 d_2$
$= \frac{1}{2}(6)(8)$
$A = 24\ cm^2$

11.
4 m
6 m   6 m
11 m

$A = \frac{1}{2}(d_1)(d_2)$
$= \frac{1}{2}(12)(15)$
$A = 90\ m^2$

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.

$A = \frac{1}{2}d_1 d_2$
$= \frac{1}{2}(8)(2\sqrt{20})$

Find the area of each rhombus.

14.
25 ft
22
25   22 ft

$A = \frac{1}{2}d_1 d_2$
$= \frac{1}{2}(44)(50)$
$A = 1100\ ft^2$

15.
6 m
4 m   20   6 m
6 m   20
6 m

16.
8 in.
39   8 in
8 in   39   10 in.
8 in
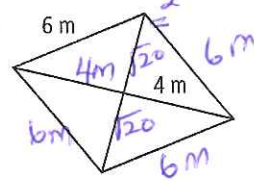
$A = \frac{1}{2}d_1 d_2$
$= \frac{1}{2}(10)(2\sqrt{39})$
$= 10\sqrt{39}\ in^2$
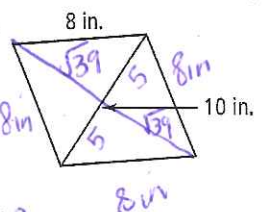
17. Find the area of a rhombus with diagonals 9 yd and 6 yd. $27 yd^2$

18. Find the area of a rhombus with diagonals 4.5 in. and 5.2 in. $11.7 in^2$