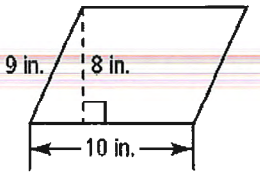
Name Answer Date

10.1 & 10.2 – Areas of Triangles, Parallelograms, Trapezoids, Rhombi, & Kites

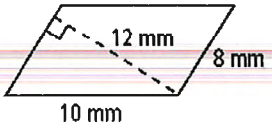
Find the area of each parallelogram. Show necessary work.

1)



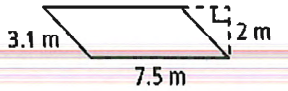
$80 in^2$

2)



$96 mm^2$

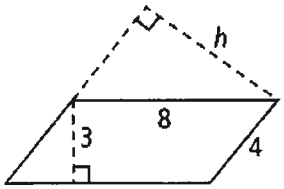
3)



$15 m^2$

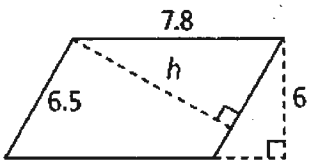
Find the value of *h* for each parallelogram. Show necessary work.

4)



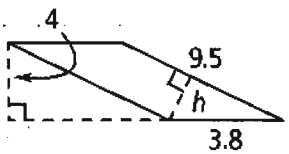
6 units

5)



7.2 units

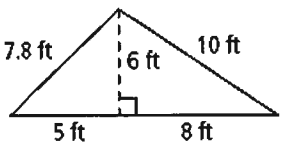
6)



1.6 units

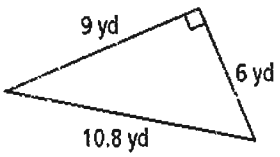
Find the area of each triangle. Show necessary work.

7)



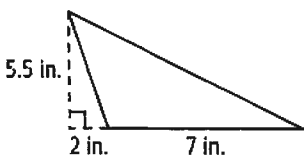
$39 ft^2$

8)



$27 yd^2$

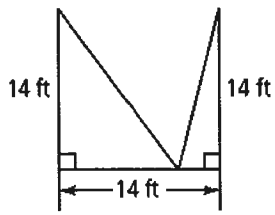
9)



$19.25 in^2$

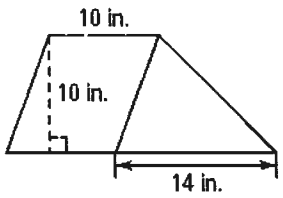
Find the area of each figure.

10)



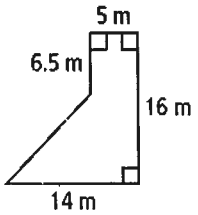
98 ft²

11)



170 in²

12)



122.75 in²

13) In a parallelogram, a base, b, and its corresponding height, h, are in the ratio of 5 : 3. The area is 135 mm^2. Find b and h.

$b = 15$ mm

$h = 9$ mm

14) A triangle has an area of 18 ft^2. List all the possible positive integers that could represent its base and height.

1, 36

2, 18

3, 12

4, 9

6, 6

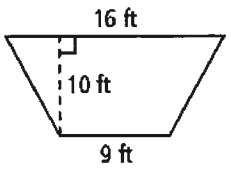
15) A parallelogram has a height of 6 units and a corresponding base of 7 units. What is the area of each triangle formed when one diagonal of the parallelogram is drawn? What is the area of each small triangle formed when two diagonals are drawn?

42 units

10.5 units.

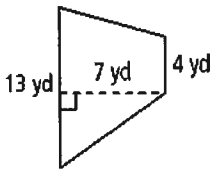
Find the area of each trapezoid. Show necessary work.

16)



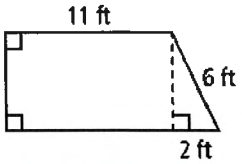
125 ft²

17)



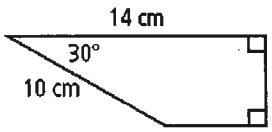
59.5 yd²

18) Leave your answers in simplest radical form.



$48\sqrt{2}$ ft²

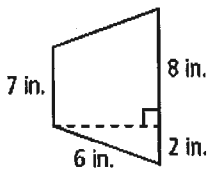
19) Leave your answers in simplest radical form.



$70 - \frac{25}{2}\sqrt{3}$ cm²

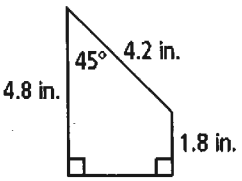
or $70 - 12.5\sqrt{3}$ cm²

20) Round to the nearest tenth.



48.1 in²

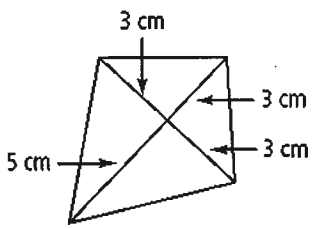
21) Round to the nearest tenth.



9.9 in²

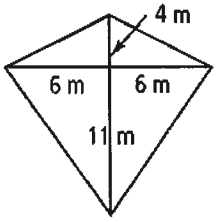
Find the area of each kite or rhombus.

22)



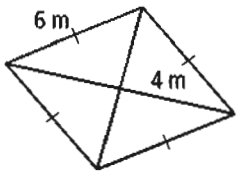
24 cm²

23)



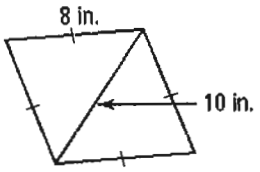
90 m²

24)



$16\sqrt{5}\ m^2$

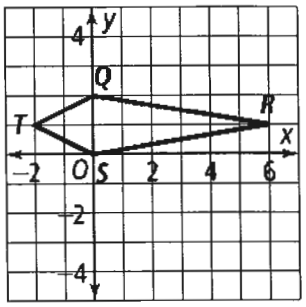
25)



$10\sqrt{39}\ in^2$

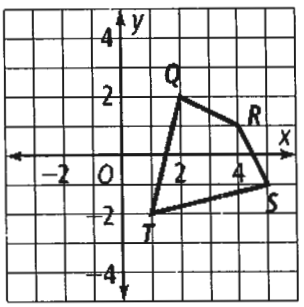
Find the area of each quadrilateral *QRST*.

26)



8 units.

27)



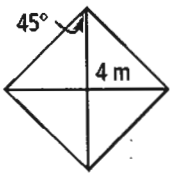
9 units.

28) One diagonal of a rhombus is 5 less than twice the other diagonal. The area is 75 cm^2. Find the length of each diagonal.

10cm

15cm

29) Find the area of the rhombus. Leave your answers in simplest radical form.



$32\ m^2$