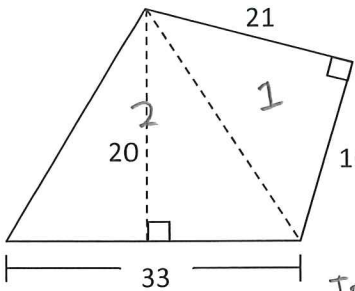


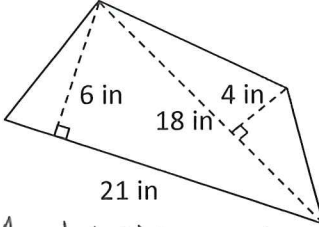
Geometry

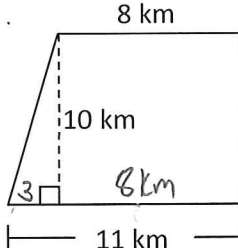
8.1 Areas of Special Quadrilaterals HW Day 2

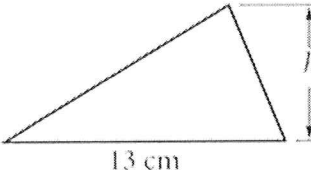
Name: Key

Calculate the area of each shape.

1.  $A = \frac{1}{2}(20)(33)$
 $1A = 330$
 $+ A = \frac{1}{2}(16)(21)$
 $2A = 168$
 Total = 498 u^2

2.  $A = \frac{1}{2}(18)(4) + \frac{1}{2}(21)(6)$
 $A = 99 \text{ in}^2$

3.  $A = \frac{1}{2}(3)(10) + (10)(8)$
 $A = 15 + 80$
 $A = 95 \text{ km}^2$

4. $A = 39$, find h .  $A = \frac{1}{2}bh$
 $39 = \frac{1}{2}(13)h$
 $78 = 13h$
 $6 \text{ cm} = h$

Solve each problem

5. The area of a triangle is 48 ft^2 . The base is 16 ft. What is the height of the triangle?

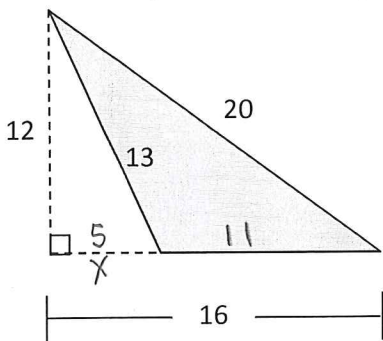
$$A = \frac{1}{2}bh$$

$$48 = \frac{1}{2}(16)h$$

$$48 = 8h$$

$$6 \text{ ft} = h$$

6. What is wrong with the following shaded area calculation? What is the correct calculation?



$$A = \frac{1}{2}(16)(12) = 96$$

Not the correct base.

$$A = \frac{1}{2}(11)(12)$$

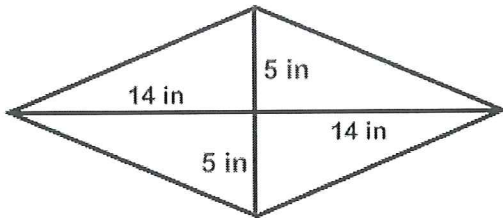
$$A = 66 \text{ u}^2$$

$$12^2 + x^2 = 13^2$$

$$x^2 = 25$$

$$x = 5$$

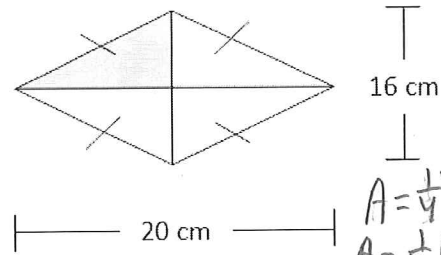
7. Find the area of the rhombus.



$$A = \frac{1}{2} (10)(28)$$

$$A = 140 \text{ in}^2$$

8. Find the area of the shaded region.



$$A = \frac{1}{4} \left[\frac{1}{2} d_1 d_2 \right]$$

$$A = \frac{1}{4} \left[\frac{1}{2} (20)(16) \right]$$

$$A = \frac{1}{4} [160]$$

$$A = 40 \text{ cm}^2$$

9. A rhombus has an area of 108 yd^2 and the length of one of its diagonals is 18 yds. Find the length of the other diagonal.

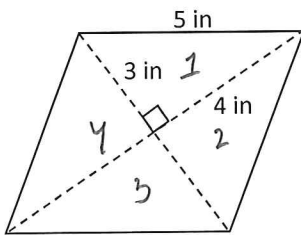
$$A = \frac{1}{2} d_1 d_2$$

$$108 = \frac{1}{2} (18) d_2$$

$$108 = 9 d_2$$

$$12 \text{ yd} = d_2$$

10. Find the area of the rhombus below using two different methods.



Method 1

$$A_{\square} = 4 \left[\frac{1}{2} (3)(4) \right]$$

$$A_{\square} = 4 [6]$$

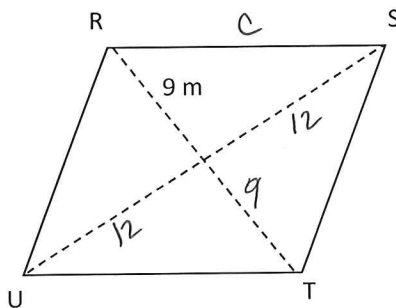
$$A_{\square} = 24 \text{ in}^2$$

Method 2

$$A_{\square} = \frac{1}{2} (6)(8)$$

$$A_{\square} = 24 \text{ in}^2$$

11. Rhombus RSTU has an area of 216 m^2 . Find the perimeter of the rhombus.



$$A = \frac{1}{2} d_1 d_2$$

$$216 = \frac{1}{2} (18) d_2$$

$$216 = 9 d_2$$

$$24 = d_2$$

$$9^2 + 12^2 = c^2$$

$$225 = c^2$$

$$15 = c$$

$$P = 4(15)$$

$$P = 60 \text{ m}$$