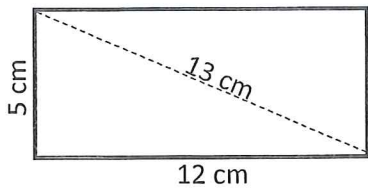


1. Rectangle

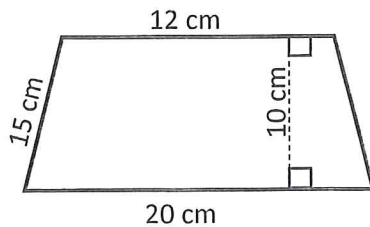


$$A = b \cdot h$$

$$A = 12 \cdot 5$$

Area: 60 cm<sup>2</sup>

2. Trapezoid

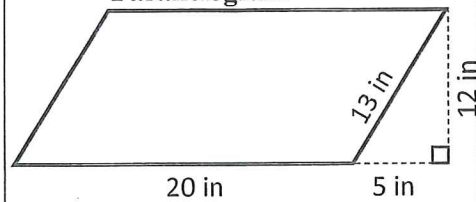


$$A = \frac{1}{2} h (b_1 + b_2)$$

$$A = \frac{1}{2} (10) (12 + 20)$$

Area: 160 cm<sup>2</sup>

3. Parallelogram

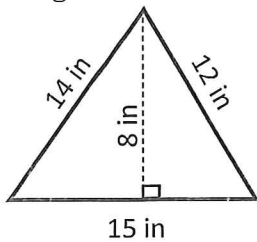


$$A = b \cdot h$$

$$A = 20(12)$$

Area: 240 in<sup>2</sup>

4. Triangle

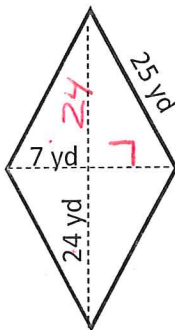


$$A = \frac{1}{2} b h$$

$$A = \frac{1}{2} 15(8)$$

Area: 60 in<sup>2</sup>

5. Rhombus

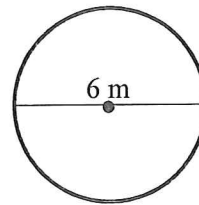


$$A = \frac{1}{2} d_1 d_2$$

$$A = \frac{1}{2} (14)(48)$$

Area: 336 yd<sup>2</sup>

6. Circle



$$A = \pi r^2$$

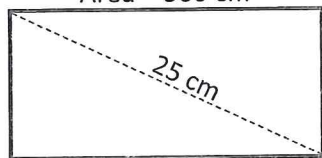
$$A = \pi (3)^2$$

Exact:  $9\pi \text{ m}^2$

Rounded: 28.2 m<sup>2</sup>

7. Rectangle

Area =  $300 \text{ cm}^2$



20 cm

$$\cancel{A = 20 \times h}$$

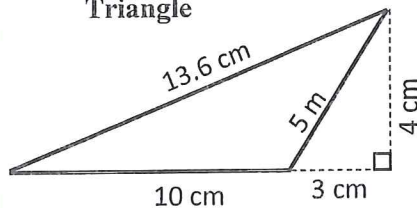
$$\frac{300}{20} = \frac{20(h)}{20}$$

$$15 = h$$

Height: 15 cm

8.

Triangle

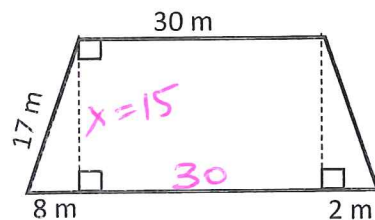


$$A = \frac{1}{2}(10)(4)$$

Area: 20 cm<sup>2</sup>

9.

Trapezoid



$$8^2 + x^2 = 17^2$$

$$64 + x^2 = 289$$

$$\sqrt{x^2} = \sqrt{225}$$

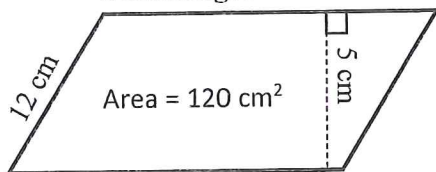
$$x = 15$$

$$A = \frac{1}{2}(15)(30 + 40)$$

Area: 525 m<sup>2</sup>

10.

Parallelogram



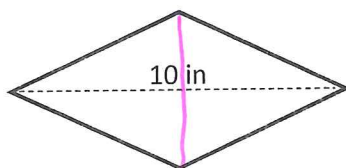
$$\frac{120}{5} = \frac{b(5)}{5}$$

$$24 = b$$

Base: 24 cm

11.

Rhombus



Area =  $150 \text{ in}^2$

$$150 = \frac{1}{2} 10(d_2)$$

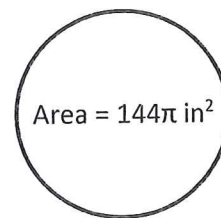
$$\frac{150}{5} = \frac{5d_2}{5}$$

$$30 = d_2$$

Area: 30 in  
d

12.

Circle



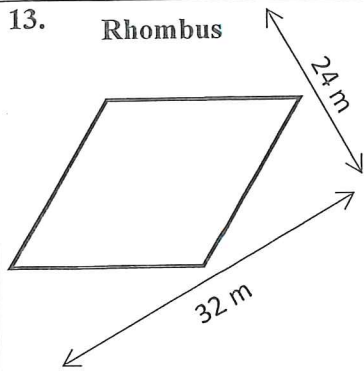
$$144\pi = \pi r^2$$

$$\sqrt{144} = \sqrt{r^2}$$

$$12 = r$$

Area: 12 in  
Radius

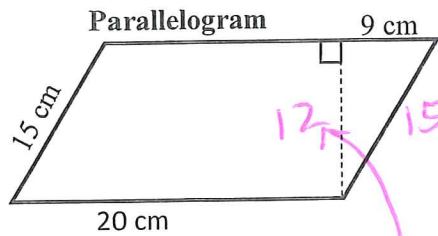
13. Rhombus



$$A = \frac{1}{2} (24)(32)$$

Area: 384 m<sup>2</sup>

14.



$$A = 20(12)$$

$$A = 240$$

$$x^2 + 9^2 = 15^2$$

$$x^2 + 81 = 225$$

$$\quad -81 \quad -81$$

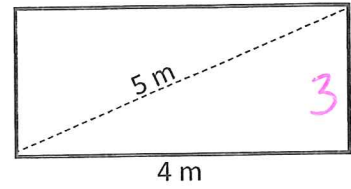
$$x^2 = 144$$

$$x = 12$$

Area: 240 cm<sup>2</sup>

15.

Rectangle



$$A = 4(3)$$

$$A = 12$$

$$x^2 + 4^2 = 5^2$$

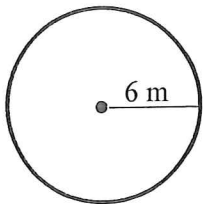
$$x^2 + 16 = 25$$

$$x^2 = 9$$

$$x = 3$$

Area: 12 m<sup>2</sup>

16. Circle



Know "exact"

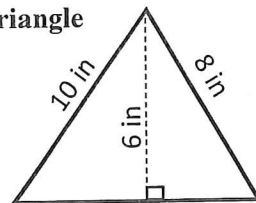
$$A = \pi (b)^2$$

Exact 36π m<sup>2</sup>

Rounded Area: 113.1 m<sup>2</sup>

17.

Triangle



Area = 120 in<sup>2</sup>

$$120 = \frac{1}{2} b(b)$$

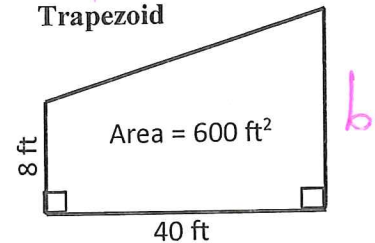
$$\frac{120}{3} = \frac{3b}{3}$$

$$40 = b$$

Base: 40 in

18. \*

Trapezoid



$$A = \frac{1}{2} h (b_1 + b_2)$$

$$600 = \frac{1}{2} (40)(b + 8)$$

$$\frac{600}{20} = \frac{20(b + 8)}{20}$$

$$30 = b + 8$$

$$\quad -8 \quad -8$$

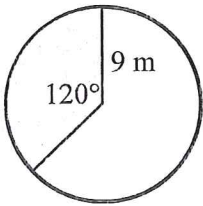
$$22 = b$$

Base: 22 ft

# Sectors - know "exact"

19.

Sector



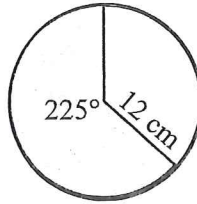
$$\frac{120}{360} \cdot \pi (9)^2$$

Exact:  $27\pi \text{ m}^2$

Rounded Area:  $84.8 \text{ m}^2$

20.

Sector

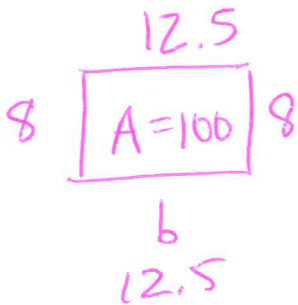


$$\frac{225}{360} \cdot \pi (12)^2$$

Exact:  $90\pi \text{ cm}^2$

Rounded Area:  $282.7 \text{ cm}^2$

21. A rectangle has an area of  $100 \text{ m}^2$ . The height of the rectangle is  $8 \text{ m}$ . What is the base of the rectangle?



$$\frac{100}{8} = \frac{b(8)}{8}$$

$b = 12.5 \text{ m}$

Also find the perimeter

$$P = 8 + 8 + 12.5 + 12.5 = \boxed{41 \text{ m}}$$

22. A circle has an area of  $225\pi \text{ ft}^2$ . What is the circumference of the circle?

$$225\pi = \pi r^2$$

$$\sqrt{225} = \sqrt{r^2}$$

$$15 = r$$

circumference

$$2\pi(15)$$

Exact  $30\pi \text{ ft}$

Rounded  $94.2 \text{ ft}$