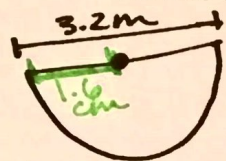


Warm Up: Round to the tenths place!

1) Find the area of a half circle whose diameter is 3.2 meters.



Area of a circle

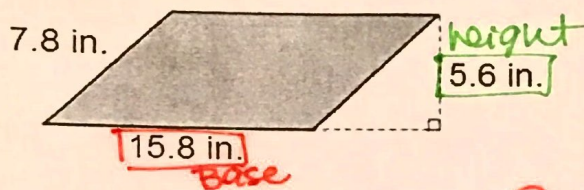
$$= \pi \cdot r^2$$

So, Half circle

$$= \frac{\pi \cdot r^2}{2} = \frac{\pi \cdot (1.6)^2}{2}$$

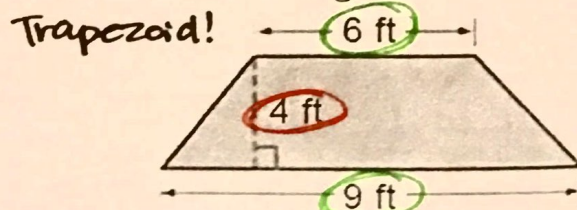
$$= \frac{\pi \cdot 2.56}{2} = 4.02123... = 4.0m^2$$

3) Find the area of the parallelogram.



$$A = b \cdot h = (15.8) \cdot (5.6) = 88.48 = 88.5in^2$$

2) Find the area of the figure.



① Add bases = $6 + 9 = 15$

② by height $15 \cdot 4 = 60$

③ \div by 2 $60/2 = 30ft^2$

4) Find the area of a triangle with base 18 feet and height 6 feet.

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

$$A = \frac{1}{2} \cdot 18 \cdot 6$$

$$A = 54ft^2$$

5) Find the area of a rectangle with length 6.1 inches and width 3.2 inches.

$$A = l \cdot w$$

$$A = 6.1 \cdot 3.2 = 19.52$$

$$19.5in^2$$

Composite Figures: A figure made up of 2 or more shapes.

Example: is \rightarrow Half circle
 \rightarrow Triangle

STEPS to FINDING THE AREA of a COMPOSITE FIGURE:

① Identify the smaller shapes that make up the figure.

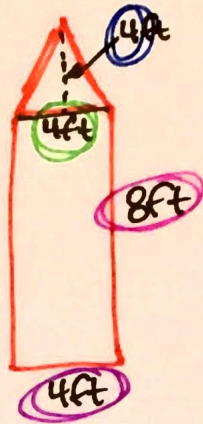
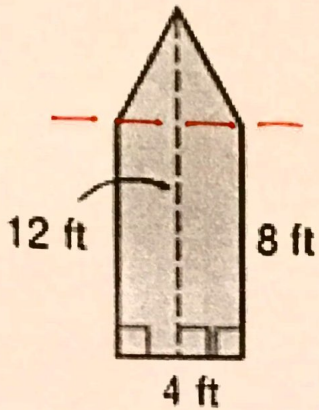
② Find the area of each of the smaller shapes.

③ Add up the areas of the smaller shapes to find the TOTAL area.

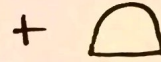
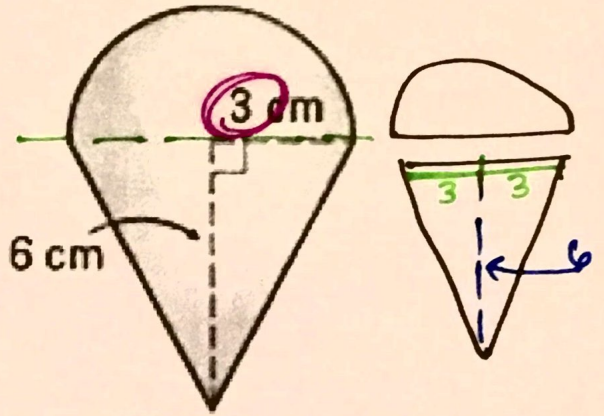
*④ Sometimes, we need to start with the bigger shape & subtract off missing pieces!
(see example 6, 7 & 8)

Find the area of each figure. Round to the nearest tenths. Use the " π " button or 3.14159.

1.



2.



$$\frac{1}{2} \cdot b \cdot h$$

$$\frac{1}{2} \cdot 6 \cdot 6$$

$$\frac{\pi \cdot r^2}{2} = \frac{\pi \cdot (3)^2}{2} = \frac{\pi \cdot 9}{2}$$

$$18 \text{ cm}^2 + 14.1371 \dots \text{ cm}^2$$

$$32.137 \dots = 32.1 \text{ cm}^2$$

$$\Delta + \square = \text{Total}$$

$$\frac{1}{2} \cdot b \cdot h$$

$$\frac{1}{2} \cdot 4 \cdot 4$$

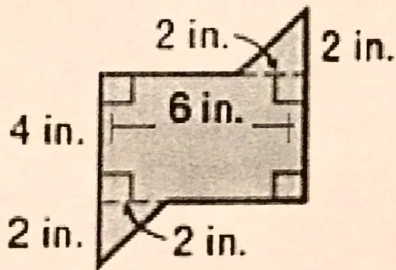
$$b \cdot h$$

$$4 \cdot 8$$

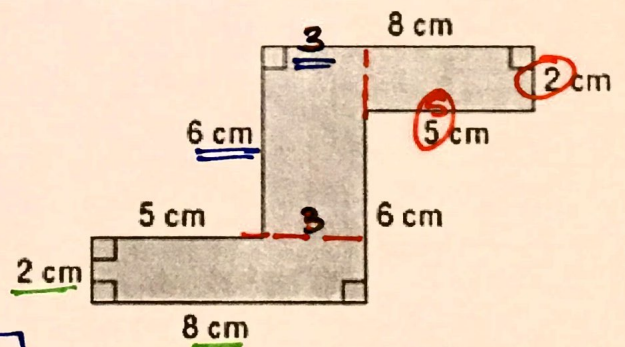
$$8 \text{ ft}^2 + 32 \text{ ft}^2 = 40 \text{ ft}^2$$

Find the area of each figure. Round to the nearest tenths. Use the " π " button or 3.14159.

3.



4.



$$\square + \square + \square$$

$$2 \cdot 8$$

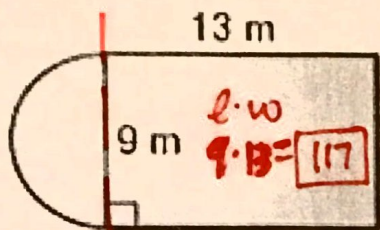
$$6 \cdot 3$$

$$5 \cdot 2$$

$$16 + 18 + 10 = 44 \text{ cm}^2$$

Find the area of each figure. Round to the nearest tenths. Use the " π " button or 3.14159.

5.



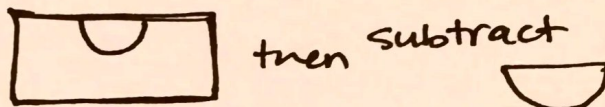
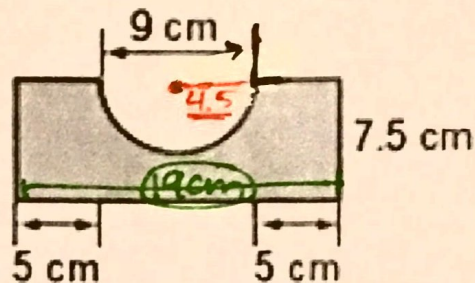
$$A = \frac{\pi \cdot r^2}{2} = \frac{\pi(4.5)^2}{2} = \frac{\pi \cdot 20.25}{2}$$

$$= 31.80\dots$$

$$= 31.8 \text{ m}^2 + 117$$

$$= 148.8 \text{ m}^2$$

6.



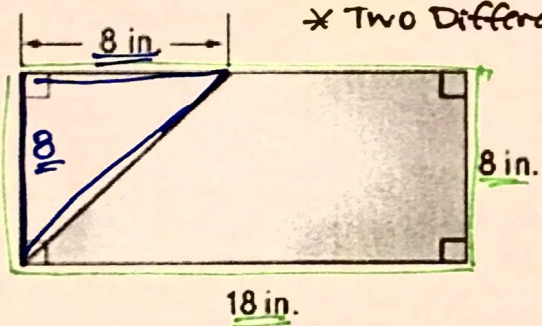
so, $19 \cdot 7.5 = 142.5$

$$\text{Area of semicircle} = \frac{\pi \cdot r^2}{2} = \frac{\pi \cdot (4.5)^2}{2} = 31.8$$

so $142.5 - 31.8 = 110.7 \text{ cm}^2$

Find the area of the shaded region. Round to the tenths if necessary.

7.

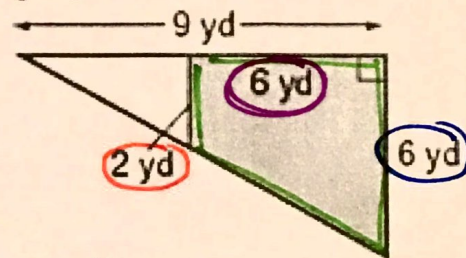


* Two Different ways to solve!

$$8 \cdot 18 - \frac{1}{2} \cdot 8 \cdot 8$$

$$144 - 32 = 112 \text{ in}^2$$

8.



way 2:

It's a trapezoid!

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

$$\frac{1}{2} \cdot (2 + 6) \cdot 6$$

$$\frac{1}{2} \cdot (8) \cdot 6$$

$$24 \text{ yd}^2$$