

4-5-18

Aim: SWBAT find the area of irregular shapes.

HW: [Packet Page 10](#)

Do Now: Packet Page 8

Homework - "Finding Radius and Diameter"

Directions. Use a formula to solve each of the following ALGEBRAICALLY! Round decimal answers to the nearest whole unit.

- 1) Find the diameter of a circle whose circumference is 66 in.

$$C = \pi d$$

$$\frac{66}{\pi} = \frac{\pi d}{\pi}$$

$$21.00845... = d$$

$$21 \approx d$$

- 3) Find the radius of a circle whose circumference is 44m.

$$C = 2\pi r$$

$$\frac{44}{2\pi} = \frac{2\pi r}{2\pi} \quad 7 \approx r$$

$$7.00281... = r$$

- 5) Find the diameter of a circle whose area is 4069.44 cm².

$$A = \pi r^2$$

$$\frac{4069.44}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{295.342983...} = \sqrt{r^2}$$

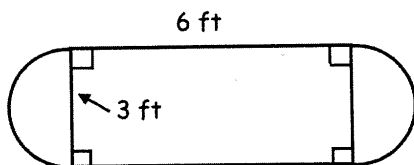
$$\pm 35.99087... = r$$

reject -35.99087...

$$36 \approx r$$

$d \approx 72$

- 7) Find the perimeter of the figure to the nearest foot.



$$P = 2(6) + \pi \cdot 3$$

$$P = 3\pi + 12 \quad P \approx 21 \text{ ft}$$

$$P = 21.42477...$$

- 2) Find the radius of a circle whose circumference is 36π cm.

$$C = 2\pi r$$

$$\frac{36\pi}{2\pi} = \frac{2\pi r}{2\pi}$$

$$18 = r$$

- 4) Find the radius of a circle whose area is 169π cm².

$$A = \pi r^2$$

$$\frac{169\pi}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{169} = \sqrt{r^2} \quad \text{reject } -13$$

$$\pm 13 = r$$

- *6) Find the area of a circle whose circumference is 18.84 ft.

$$C = 2\pi r \quad A = \pi r^2$$

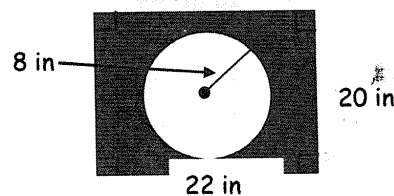
$$\frac{18.84}{2\pi} = \frac{2\pi r}{2\pi} \quad A = \pi (2.9984...) ^2$$

$$2.99847... = r \quad A = 866.5206... \pi$$

$$A = 2722.254973...$$

$$A \approx 2722 \text{ ft}^2$$

- 8) Find the area of the shaded region to the nearest inch.



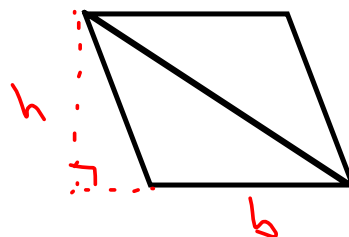
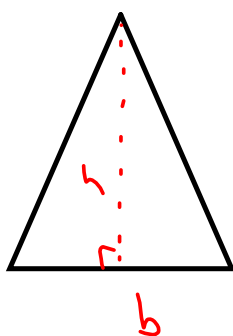
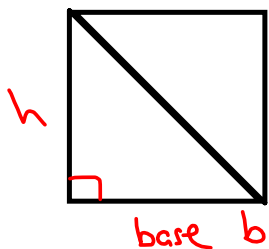
$$A = (20 \cdot 22) - \pi \cdot 8^2$$

$$A = 440 - 64\pi \quad A \approx 239 \text{ in}^2$$

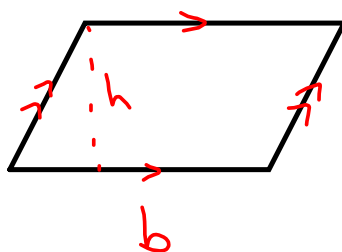
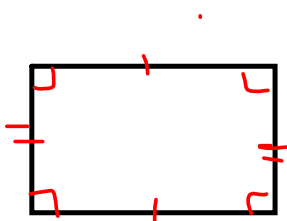
$$A = 238.93807...$$

Triangles

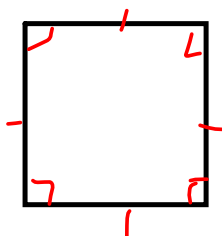
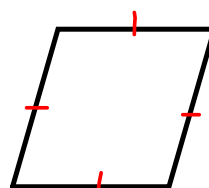
$$A = \frac{bh}{2}$$



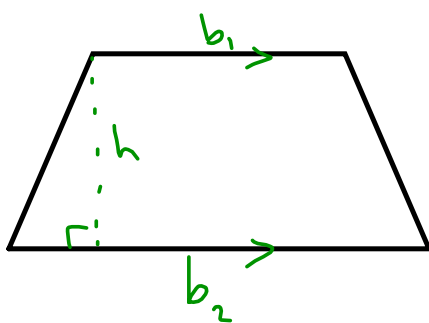
Parallelograms



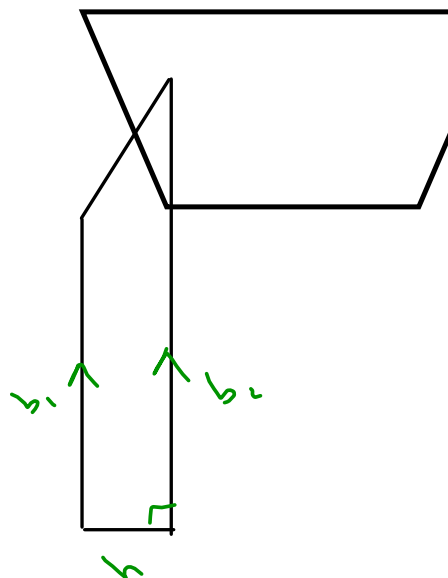
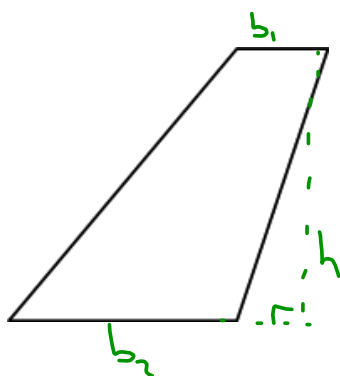
$$A = bh$$



Trapezoids



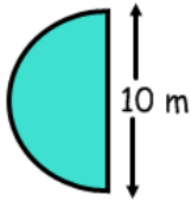
$$A = \frac{(b_1 + b_2)h}{2}$$



AIM: SWBAT find the area of the irregular shape.

DO NOW:

Find the exact AND approximate area (round to the nearest tenth) of the shaded figure below.



in terms of π

$$A = \frac{\pi r^2}{2}$$

$$A = \frac{\pi \cdot 5^2}{2}$$

$$A = \frac{25\pi}{2}$$

$$A = 12.5\pi$$

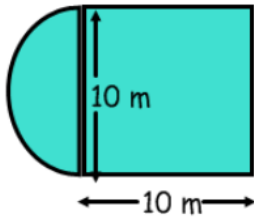
Exact Area: $12.5\pi \text{ m}^2$

Approximate Area (nearest tenth): $A \approx 39.3 \text{ m}^2$

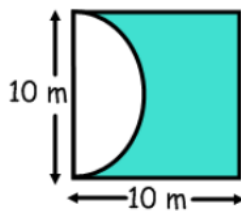
Practice Problems:

Find the area of the irregular shapes, round to the nearest whole number when necessary.

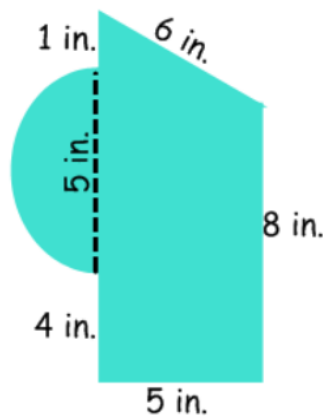
1)



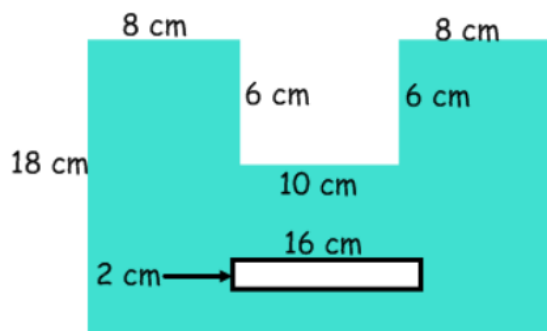
2)



3)



4) You Try!



Homework - Area of Irregular Shapes

Find the area of the shaded regions; round to the nearest tenth when necessary.

