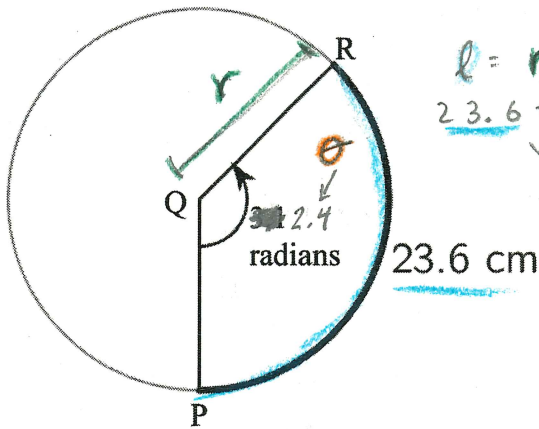


NW

1. Find the area of sector PQR given that the length of arc PR with measure 2.4 radians is 23.6 cm



$$l = r \cdot \theta$$

$$23.6 = r \cdot (2.4)$$

$$\frac{23.6}{2.4} = \frac{r \cdot 2.4}{2.4}$$

$$9.83 = r$$

Formulas to know: (θ in RAO)

Arc Length: $l = r \cdot \theta$

Sector Area: $A = \frac{r^2 \cdot \theta}{2}$

θ : central angle
 r : radius

$$A = \frac{(9.83)^2 \cdot (2.4)}{2}$$

$$A = \frac{(96.63)(2.4)}{2}$$

$$A = 115.96 \text{ cm}^2$$

2. Convert each to the appropriate unit:

	Degrees	Radians
a.)	120°	$\frac{2\pi}{3}$
b.)	135°	$\frac{3\pi}{4}$
c.)	30°	$\frac{\pi}{6}$

to Convert:

$$180^\circ = \pi \text{ rad}$$

a.)

$$\frac{120^\circ}{x} = \frac{180^\circ}{\pi}$$

(deg / rad)

$$120\pi = 180x$$

$$\frac{120\pi}{180} = \frac{180x}{180}$$

$$\frac{120\pi}{180} = x$$

reduce fraction

$$\frac{2\pi}{3} = x$$

b.)

$$\frac{3\pi}{4} = \frac{\pi}{180} \cdot x$$

(rad / deg)

$$\frac{3\pi}{4} \cdot 180 = \pi \cdot x$$

$$135\pi = \pi x$$

$$\frac{135\pi}{\pi} = \frac{\pi x}{\pi}$$

$$135 = x$$

c.)

$$\frac{30^\circ}{x} = \frac{180^\circ}{\pi}$$

deg / rad

$$30\pi = 180x$$

$$\frac{30\pi}{180} = \frac{180x}{180}$$

$$\frac{30\pi}{180} = x$$

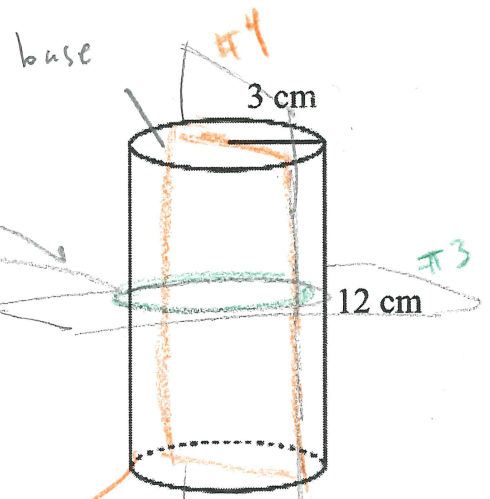
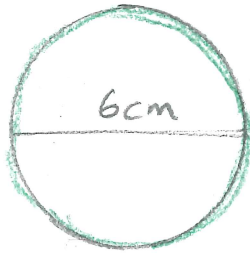
reduce fraction

$$\frac{1\pi}{6} = x$$

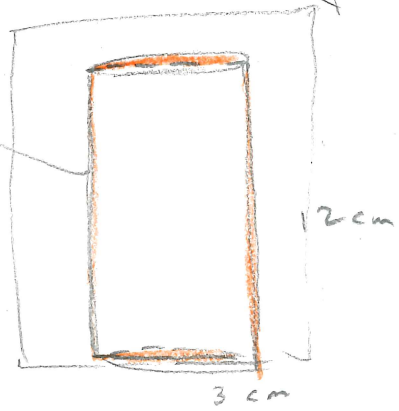
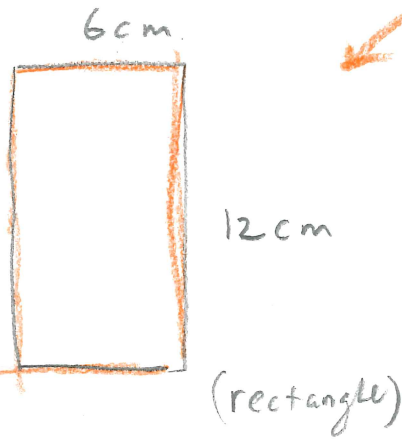
$$= \frac{\pi}{6}$$

GMD-4a:

3. Below, sketch and label the shape of the cross section to the cylinder parallel to the base.



4. Below, sketch and label the shape of the cross section to the cylinder perpendicular to the base.



GMD-4B

5. Select ALL of the following that are true, if the rectangle is revolved around line m.

- It forms a rectangular prism with height 2
- It forms a cylinder with height 2
- It forms a cylinder with height 4
- It forms a cylinder with radius 2
- It forms a cylinder with radius 1

