

Prerequisite Skills (Review)

Section 1.0 B

EQ: How can you measure, name, and classify angles?

How do you classify polygons? How do you find area & perimeter?

protractor

Instrument to  
measure angles

area

The amount of surface covered by  
an enclosed figure or polygon

classes of polygons

Based on the # of sides

Name of a polygon

pg. 43 in book\*

classes of angles

Acute:  $0^\circ < \text{measure} < 90^\circ$

Right:  $\text{measure} = 90^\circ$

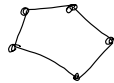
Obtuse:  $90^\circ < \text{measure} < 180^\circ$

Straight:  $\text{measure} = 180^\circ$

convex and concave polygons

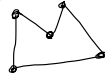
No sides

"pushed" in



Side(s)

"pushed" in

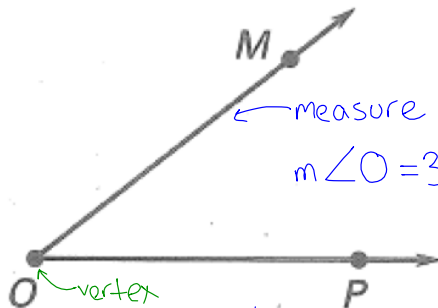


perimeter or circumference

The distance around a figure; add  
all sides

circle => circumference =  $C = 2\pi r$   
radius

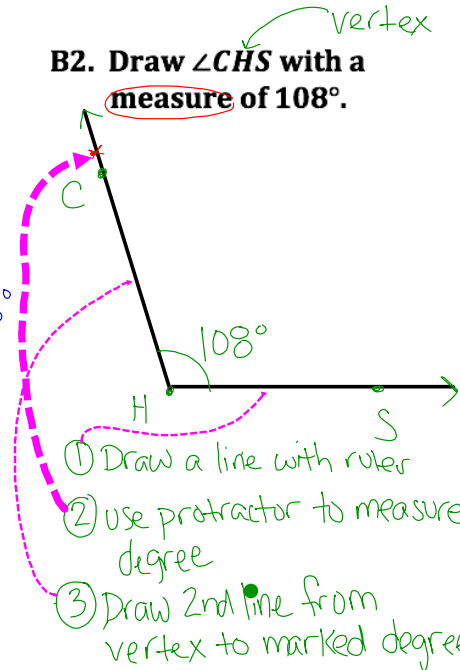
**B1. Find the measure, name,  
and classify the angle.**



Classify:  
Acute

Name:  
 $\angle O$   
 $\angle MOP$   
 $\angle POM$

**B2. Draw  $\angle CHS$  with a  
measure of  $108^\circ$ .**



- ① Draw a line with ruler
- ② use protractor to measure degree
- ③ Draw 2nd line from vertex to marked degree

**B3. Given  $m\angle ABC = 94^\circ$ , find  $m\angle DBC$ .**

measure  $\nearrow$

$$m\angle ABD + m\angle DBC = m\angle ABC$$

$$\underline{3x+15} + \underline{x+7} = 94$$

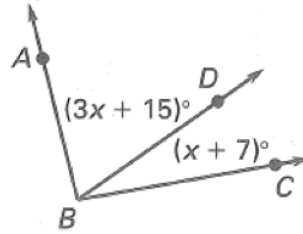
$$4x + 22 = 94$$

$$\quad -22 \quad -22$$

$$\frac{4x}{4} = \frac{72}{4}$$

$$x = 18$$

*\* Now substitute x-value*

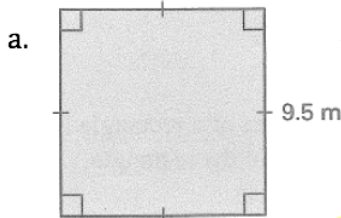


$$m\angle DBC = x + 7$$

$$= (18) + 7$$

$$m\angle DBC = 25^\circ$$

**B4. Find the area of each figure.**



$$\text{Area (rectangle)} = (\text{length})(\text{width})$$

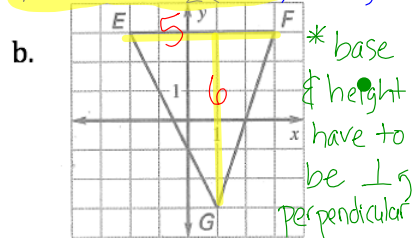
$$\text{Area (square)} = (\text{length})^2$$

$$A = (9.5)(9.5)$$

OR

$$(9.5)^2 = 90.25 \text{ m}^2$$

$$\text{Area } \triangle = \frac{1}{2} (\text{base})(\text{height})$$

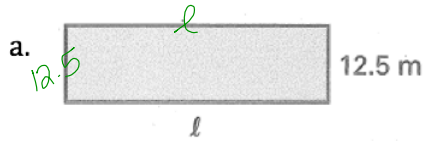


$$A = \frac{1}{2} (b)(h)$$

$$A = \frac{1}{2} (5)(6)$$

$$A = 15 \text{ units}^2$$

**B5. Find the perimeter and area of each figure.**



$$P = l + l + 12.5 + 12.5$$

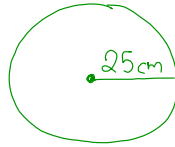
$$P = 2l + 25 \text{ m}$$

$$\text{Area} = (L)(w)$$

$$= (l)(12.5)$$

$$A = 12.5l \text{ m}^2$$

b. A circle with radius 25 cm.



Perimeter = Circumference

$$C = 2 \cdot \pi \cdot r$$

$$C = 2 \cdot \pi (25)$$

$$C = 50\pi \text{ cm}$$

exact answer

$$C \approx 157.08 \text{ cm}$$

approximation

$$\text{Area } \odot$$

$$= \pi r^2$$

$$= \pi (25)^2$$

exact

$$A = 625\pi \text{ cm}^2$$

$$A \approx 1963.50 \text{ cm}^2$$

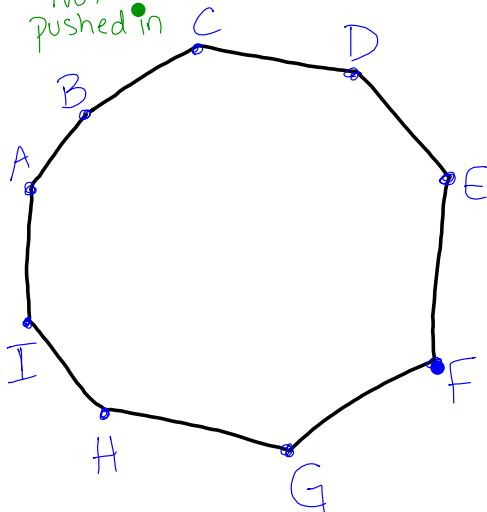
Approximate

**B6. Sketch the following.**

a. Convex nonagon ABCDEFGHI

9 sides

NOT pushed in



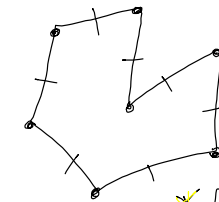
b. Regular concave heptagon

pushed in

↳ 7 sides

↳ All sides  $\cong$  (equal)

↳ All angles  $\cong$  (equal)



Not possible

\* All side  $\cong$

But  $\angle$ 's not =

EQ: How can you measure, name, and classify angles?

④ How do you classify polygons?

How do you find area & perimeter?

## 1.0B Summary:

- ① Measure  $\angle$ s with a protractor in degrees
- ② Name  $\angle$ s by their vertex or with 3 points on the  $\angle$  including the vertex (ex # B1)
- ③ Classify  $\angle$ s by their degree:
  - Acute  $0^\circ < m < 90^\circ$
  - Right =  $90^\circ$
  - Obtuse  $90^\circ < m < 180^\circ$
  - Straight =  $180^\circ$
- ④ Classify polygons by name based on # of sides (p.43)
- ⑤ Area
  - $\square = (L)(w)$
  - $\triangle = \frac{1}{2}(b)(h)$
  - $\odot = \pi r^2$
- ⑥ Perimeter
  - \* Add up all sides
  - \* Circles =  $2\pi r$

⑤

⑥

label  
just  
units<sup>2</sup>

label  
just  
units