

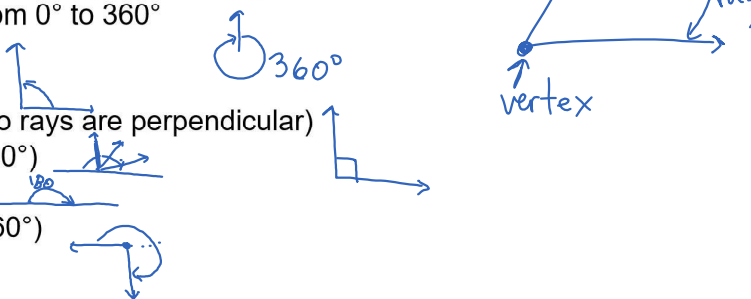
## Unit 5 Notes: Angles and Parallel Lines (pages 214-215)

SPECIAL NOTE ABOUT THIS UNIT: You can only perform operations on values if their units are the same!

### 5.1 – Measuring, Drawing and Estimating Angles

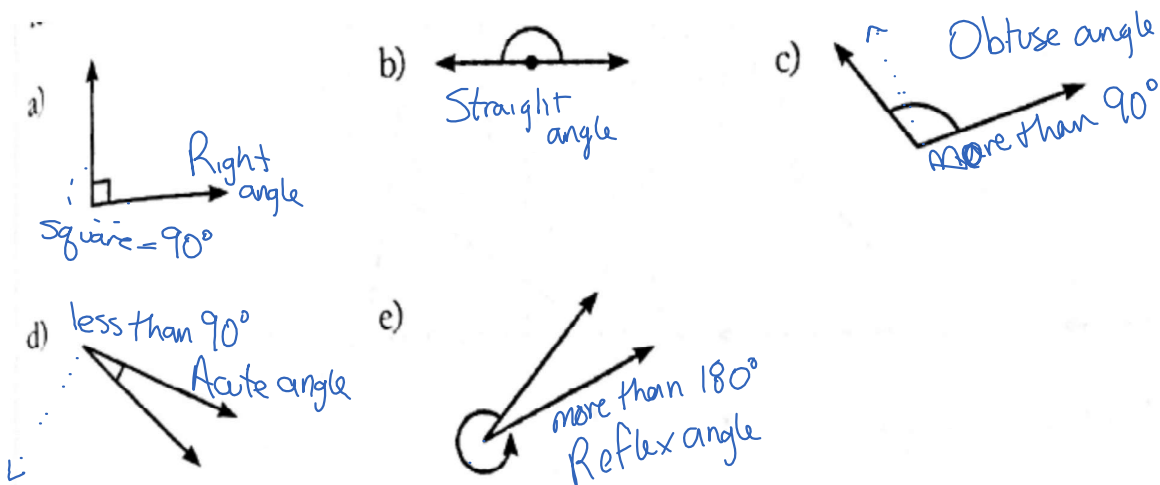
The basics:

1. An angle is formed when two rays meet at a point called a vertex.
2. Angles are measured from  $0^\circ$  to  $360^\circ$
3. Angles can be:
  - a. Acute ( $0^\circ$  to  $90^\circ$ )
  - b. Right ( $90^\circ$ ; the two rays are perpendicular)
  - c. Obtuse ( $90^\circ$  to  $180^\circ$ )
  - d. Straight ( $180^\circ$ )
  - e. Reflex ( $180^\circ$  to  $360^\circ$ )



#### Example 1:

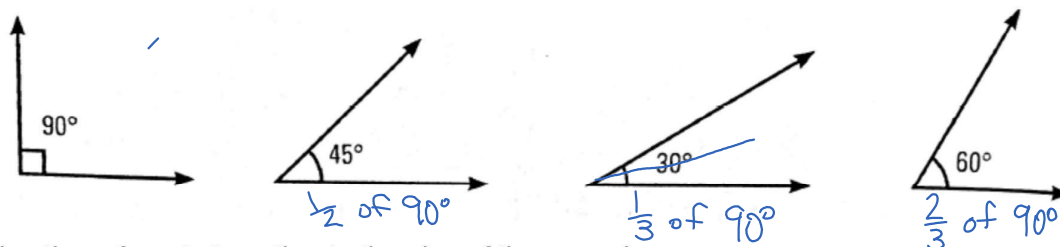
Identify the type of angle: acute, right, obtuse, straight, or reflex.



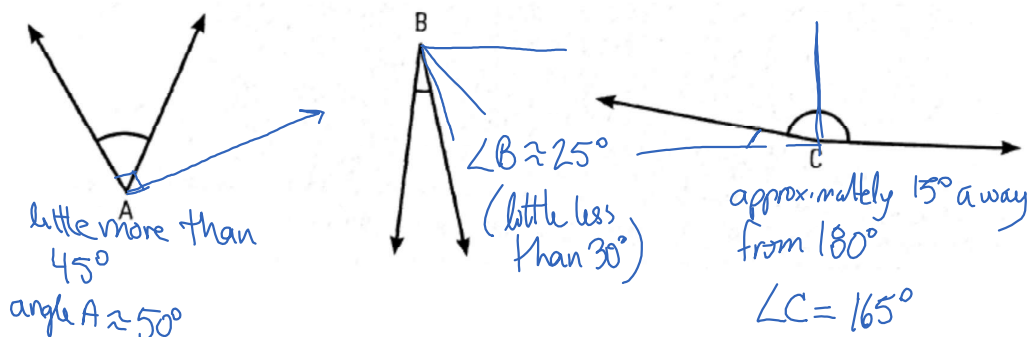
\*\*Complete Build Your Skills #1 on page 215.

**Example 2:**

In many jobs you may have to estimate angles. To estimate the size of the angle, compare them to the references.



Use the referents to estimate the size of these angles.

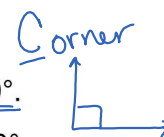


\*\*Complete Build Your Skills #2-4 on page 217.

**Example 3:**

**Complementary angle:** two angles that have measures that add up to  $90^\circ$ .

**Supplementary angle:** two angles that have measures that add up to  $180^\circ$ .



Given each of the following angles, determine the size of the **complement** and/or the **supplement** (if they exist).

a)  $75^\circ$   
 $C = 90^\circ - 75^\circ = 15^\circ$   
 $S = 180^\circ - 75^\circ = 105^\circ$

b)  $43^\circ$   
 $C = 90^\circ - 43^\circ = 47^\circ$   
 $S = 180^\circ - 43^\circ = 137^\circ$

c)  $103^\circ$   
 $C = \text{none} (\angle \text{ is bigger than } 90^\circ)$   
 $S = 180^\circ - 103^\circ = 77^\circ$

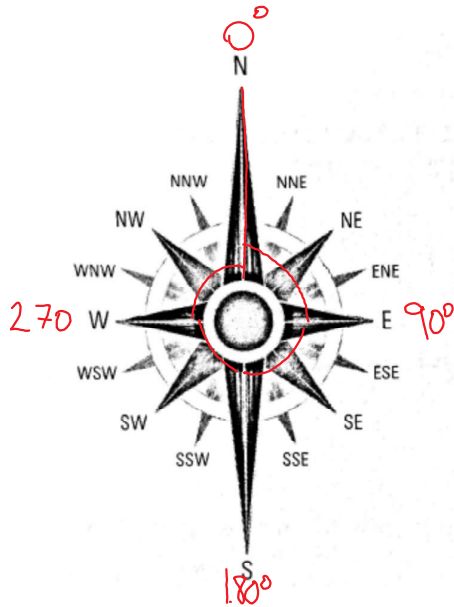
d)  $87^\circ$   
 $C = 90^\circ - 87^\circ = 3^\circ$   
 $S = 180^\circ - 87^\circ = 93^\circ$

e)  $300^\circ$   
 $C = \text{none (larger than } 90^\circ)$   
 $S = \text{none (larger than } 180^\circ)$

\*\*Complete Build Your Skills 6-8 on pages 219-220.

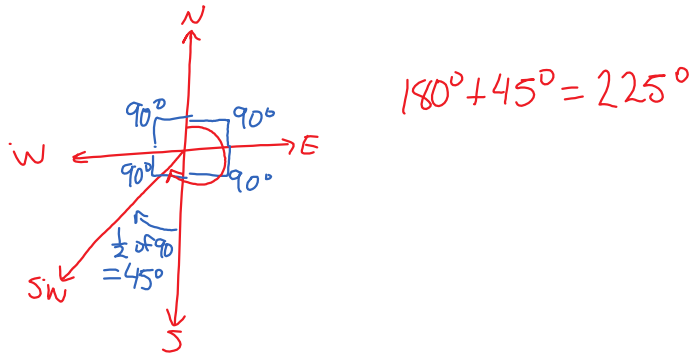
**True bearing:** the angle measured clockwise between true north and an intended path or direction.

*measured from North*



**Example 4:**

A boat is heading directly southwest. What is the true bearing?



**\*\*Complete Build Your Skills #9-11 on page 222.**

**\*\*Complete Practise Your New Skills #1-5 on pages 222-224.**