

## 2.1.2: Constructing Angles

Construction in geometry means to draw shapes, angles or lines accurately. These constructions use only \_\_\_\_\_, \_\_\_\_\_ and a \_\_\_\_\_.

Bisecting a line segment

1. Place the \_\_\_\_\_ at one end of line segment.
2. Adjust compass to slightly \_\_\_\_\_ than \_\_\_\_\_ of the line segment.
3. Draw arcs \_\_\_\_\_ and \_\_\_\_\_ the line from one \_\_\_\_\_.
4. \_\_\_\_\_ from other \_\_\_\_\_.
5. Place \_\_\_\_\_ where the \_\_\_\_\_ cross and \_\_\_\_\_ a \_\_\_\_\_.



## Bisecting an angle

1. Place the \_\_\_\_\_ at the \_\_\_\_\_ of the \_\_\_\_\_.
2. Draw \_\_\_\_\_ on each \_\_\_\_\_ of the \_\_\_\_\_.
3. Without adjusting the \_\_\_\_\_, draw an \_\_\_\_\_ between the rays of the \_\_\_\_\_ from the point where the first arc \_\_\_\_\_ the \_\_\_\_\_.
4. . \_\_\_\_\_ from the \_\_\_\_\_ \_\_\_\_\_.
5. Place \_\_\_\_\_ where the arcs \_\_\_\_\_ and \_\_\_\_\_ a line.



## Constructing a 60° angle

1. Start with a \_\_\_\_\_.
2. Choose a point and draw a \_\_\_\_\_ (almost a \_\_\_\_\_ circle)
3. Do not adjust compass. From the point made between the \_\_\_\_\_ and \_\_\_\_\_, draw another \_\_\_\_\_ that \_\_\_\_\_ the first arc drawn.
4. Place \_\_\_\_\_ where the \_\_\_\_\_ \_\_\_\_\_ and draw a \_\_\_\_\_.



### Constructing a $30^\circ$ angle

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



## Constructing a $45^\circ$ angle

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



Which angles can't we draw this way?

What is a limitation to drawing angles?

Constructing Angles w/s