Rotations

**Centre of Rotation:** a fixed point around which other points in a shape rotate in a clockwise (cw) or counter-clockwise (ccw) direction; may be inside or outside the shape

**Rotating a Figure Around a Point Using a Protractor & Compass**

1. Make a point at the centre of rotation
2. Look for the angle of rotation (how many degrees) and direction of rotation (clockwise or counter-clockwise) required
3. Choose one point (vertex) on the figure to rotate
4. Draw a line segment (lightly) from centre of rotation to point on figure that you’re rotating

**Note: If rotating around a point/vertex that’s part of shape, skip Step 4**

1. Draw the required angle with the centre of rotation point as the vertex:
   * Line up the protractor so the line or the hole in the centre is on the centre of rotation point
   * Make sure the point being rotated is lined up with the 0 (zero)
   * Find the required angle on the protractor that would turn the point in the correct direction
   * Make a mark at the point of the required angle of rotation
   * Create the angle by drawing a line from the centre of rotation point towards the mark for the angle
2. Use a compass to draw an arc from the point rotating to the angle line
3. Put the new prime point where the arc intersects with the angle line (label)
4. Follow steps 3-7 for the remaining vertices/points of the figure and connect the dots