IMP 3 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Constructions Practice Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete the following constructions using only a straightedge, compass, and pencil.

1. Given and below, answer the following questions.

*C*

*D*

*B*

*A*

1. Copy below.
2. On the sketch in part (a), draw the perpendicular bisector of
3. Draw a line segment with length AB + CD.
4. Draw a line segment with length AB + 2CD
5. Draw line segment CD – AB
6. Construct an equilateral triangle with sides .

*C*

*D*

1. Using , below, construct a triangle with sides , , .

*Y*

*X*

1. Copy below

*R*

*P*

*Q*

1. Draw a line that is perpendicular to and passes through point P.

*P*

*K*

*L*

1. Draw a line that is perpendicular to and passes through point Q.

*K*

*L*

*Q*

1. Construct perpendicular bisectors so that is divided into four equal segments.

*S*

*T*

1. Given and , answer the questions below.

*Z*

*Y*

*X*

*A*

*B*

*C*

1. Copy
2. Copy
3. Construct +
4. Construct –
5. Use your compass and straight edge to find the point that is equidistant from the three points *I, M,* and *P*. Label that circumcenter C. Construct the circle that is circumscribed about the triangle.

*I*

*P*

*M*

1. Inscribe a circle in the triangle below.