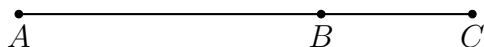## Homework 1.4: Segment addition

1. I have a compass, ruler, protractor, notebook, and folder (circle one). Yes   No

2. Use each term according to its geometric meaning: "sketch", "draw", "construct".

   (a) ——————————— is to make a freehand diagram showing important features.

   (b) ——————————— is to depict with accurate measures using ruler, protractor, and compass.

   (c) ——————————— is a formal, logical process to create geometric figures using only a straightedge and compass.
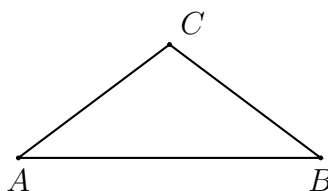
3. Two or more line segments of equal measure are ———————————.

4. Given $\overline{ABC}$, $AB = 10$, and $BC = 4$.

   (a) Find AC.

   (b) The postulate used in this problem is the ———————————.

5. Given $\triangle ABC$ with $\overline{AC} \cong \overline{BC}$. On the diagram mark the congruent line segments with tick marks.

6. Given line segment $\overline{AB}$ with midpoint M, that is, $\overline{AM} \cong \overline{BM}$. $AM = 2$ cm. Find the length of $\overline{AB}$.

7. Points that are all located on the same line are ———————————.
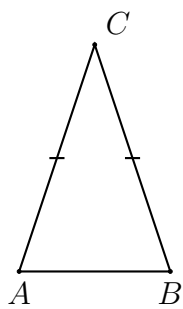
8. Given the points X and Y, draw $\overrightarrow{YX}$.
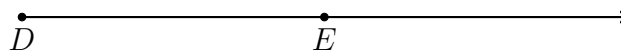
$\bullet$
X

$\bullet$
Y

9. Given $\triangle ABC$ write down two congruent line segments using proper notation.

C

A B

10. Given $\overrightarrow{DE}$, construct circle E with radius DE.

D E

Spicy: Complete the construction of an equilateral triangle with one side $\overline{DE}$.