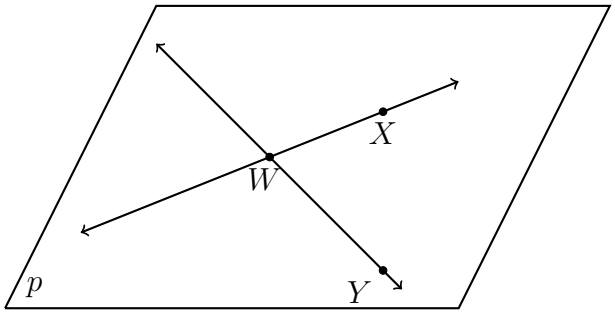
Mixed Review Name:
2 May 2022

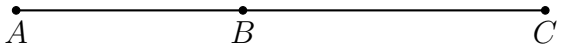
11.1 Quiz Trigonometry **HSG.SRT.C.8**

1. Points that are all located on the same plane are _____.

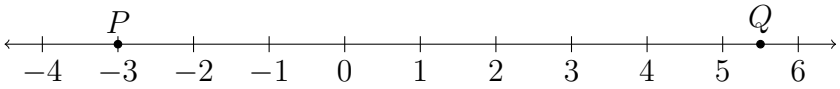
2. Identify three points in the given plane.



3. Given $\overline{ABC}$, $AB = 3x - 4$, $BC = x + 5$, $AC = 13$. Find BC.
Check your answer for full credit.



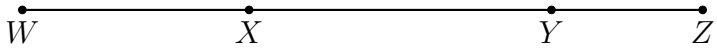
4. Given $\overleftrightarrow{PQ}$ as shown on the number line, with $P = -3$ and $Q = 5.5$.



What is the exact distance on the number line between the points P and Q?

5. Given $\overline{WXYZ}$, $WX = 3\frac{1}{2}$, $XY = 4\frac{3}{4}$, and $YZ = 1\frac{1}{4}$.

Find WZ.



6. Given the points V and W, draw $\overrightarrow{WV}$.

7. Use symbols to write the name of each geometric figure.
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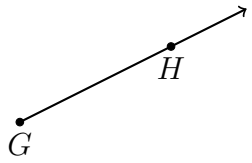
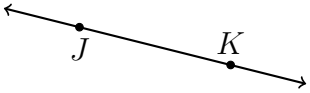
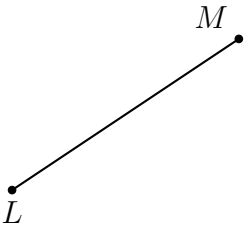
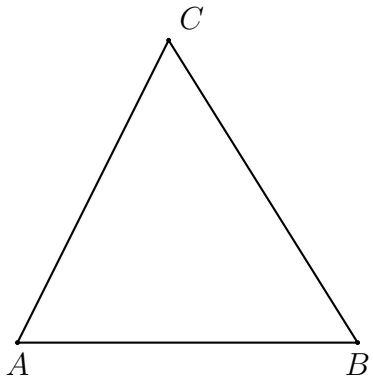
(a) 

(b) 

(c) 

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

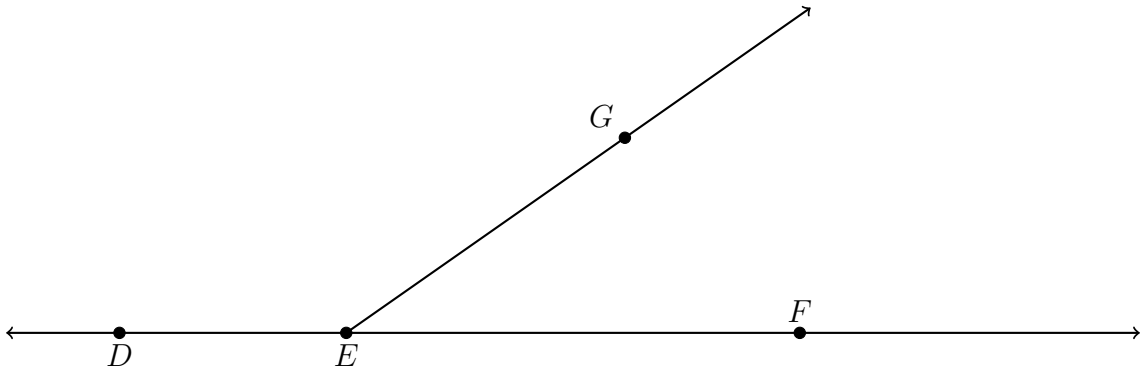


9. Find the measure of the angle in degrees and the given segment's length in centimeters.

(a) $m\angle GEF =$ _____

(b) $EG =$ _____

(c) Name a pair of opposite rays: _____



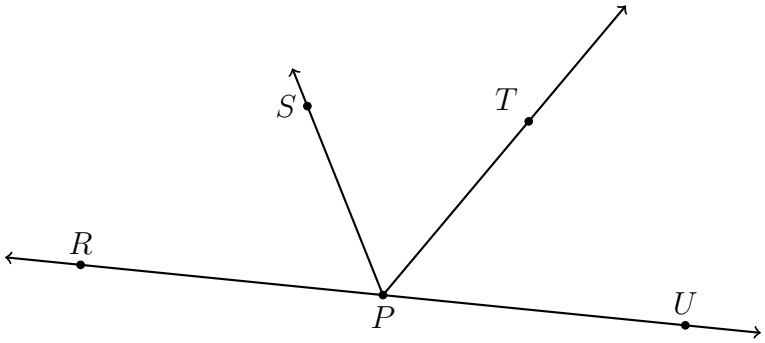
10. Use each term according to its geometric meaning: "sketch", "draw", "construct".

    (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.

11. Given the situation in the diagram, answer each question. Circle True or False.

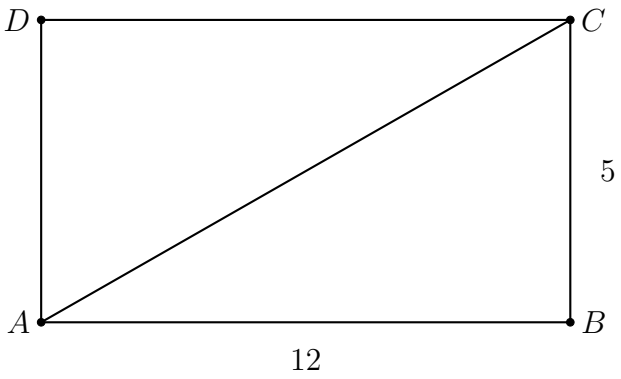


    (a) True or False: $\overrightarrow{PR}$ and $\overrightarrow{PU}$ are opposite rays.

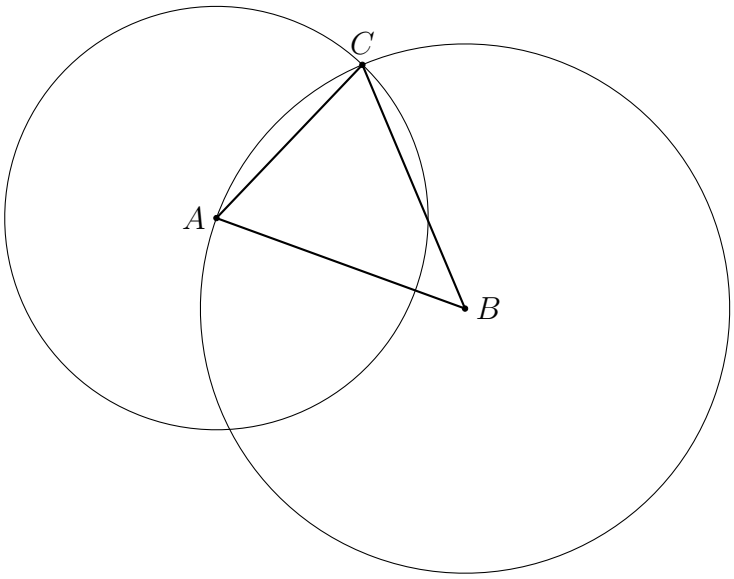
    (b) True or False: $\angle TPR$ is an obtuse angle.

    (c) True or False: $\angle RPS$ and $\angle TPU$ are adjacent angles.

12. Given the rectangle $ABCD$ shown below, with $AB = 12$ and $BC = 5$. The diagonal $\overline{AC}$ is drawn to create two triangles. Find the area of the lower triangle, $\triangle ABC$.



13. A student constructs a triangle with a given side, $\overline{AB}$ as shown below. Is $\triangle ABC$ equilateral? Justify your answer by explaining what was done incorrectly and how it should have been done.



14. In the following two problems, solve for the value of x.

    (a) $3(x-5) = -33$ (b) $3 - \frac{1}{2}x = 2$

15. In the following two problems, solve for the value of x by factoring.

    (a) $x^2 + 6x = -5$ (b) $x^2 = x + 12$