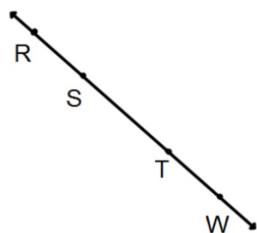


Use the diagram below for questions 1 – 4.



1. Name all labeled segments.

\overline{RS} \overline{ST} \overline{TW}

2. Name all labeled rays.

\overrightarrow{RS} \overrightarrow{ST} \overrightarrow{TW} \overrightarrow{TR} \overrightarrow{RW} \overrightarrow{SW}

3. Name a pair of opposite rays with T as the endpoint.

\overrightarrow{TW} \overrightarrow{TR}

4. Name another pair of opposite rays that do not start at T.

\overrightarrow{SW} \overrightarrow{SR}

5. Draw a line segment with endpoints D and L.



6. Draw opposite rays \overrightarrow{HF} and \overrightarrow{HW} .



7. True or False: Opposite rays always form a line.

True

Fill in the blank with *always*, *sometimes*, or *never*.

8. \overrightarrow{AB} and \overrightarrow{BA} are always the same line.

9. \overrightarrow{JK} and \overrightarrow{JL} are never the same ray.

10. \overline{AB} and \overline{BA} are always the same segment.

11. \overline{AB} and \overline{AB} are always the same part of a line.

9. **REVIEW** Solve each quadratic equation for x .

a. $x^2 - x - 6 = 0$

$0 = (x - 3)(x + 2)$
 $x = 3$ or -2

b. $x^2 + 5x = -2x - 12$

$+2x + 2x$

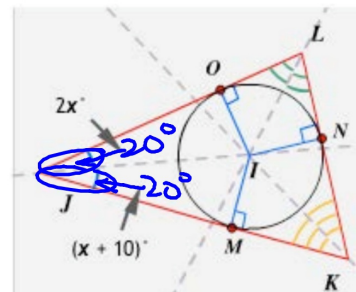
$x^2 + 7x + 12 = 0$

$\begin{array}{r} 12 \\ 4 \times 3 \\ 12 \end{array}$

$(x+4)(x+3) = 0$

$x = -4 \text{ or } -3$

10. **REINFORCE** In the diagram, the circle is inscribed in $\triangle JKL$. Find the value of x given the angle measurements shown on the diagram.



Ray $J\mathbf{I}$ is the angle bisector of $\angle J$.

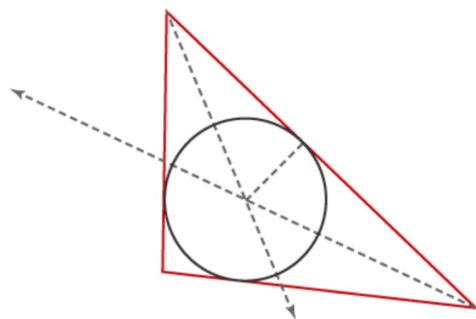
$2x = x + 10$

$x = 10$

11. **REINFORCE** Draw an acute triangle and construct the inscribed circle. Explain your construction method.

Student answers may vary. Sample answer:

Use Patty Paper to fold the angle bisectors of two angles of the triangle. The point of intersection is the center of the inscribed circle. Fold the Patty Paper so that the crease passes through the center of the inscribed circle and one side of the triangle is folded onto itself. This constructs a perpendicular line from the center to a side of the triangle. That distance is the radius of the inscribed circle.



1. Write a definition of each of the following terms. [EX3, page 1]

a. **Midpoint**

a point on the line segment that is equidistant from each endpoint.

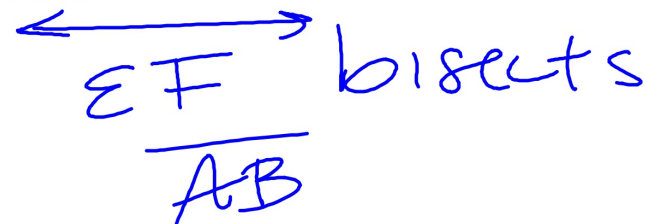
divides into two \cong segments

b. **Perpendicular bisector**

a line, ray, segment
that intersects another
line at a rt \angle .

divides the segment
into two equal
parts.

2. Consider the diagram shown. Name the perpendicular bisector and the segment it bisects. [EX3, page 1]



3. What does the small square in the diagram above indicate? [EX3, page 1]

a 90° (right)
 \angle .