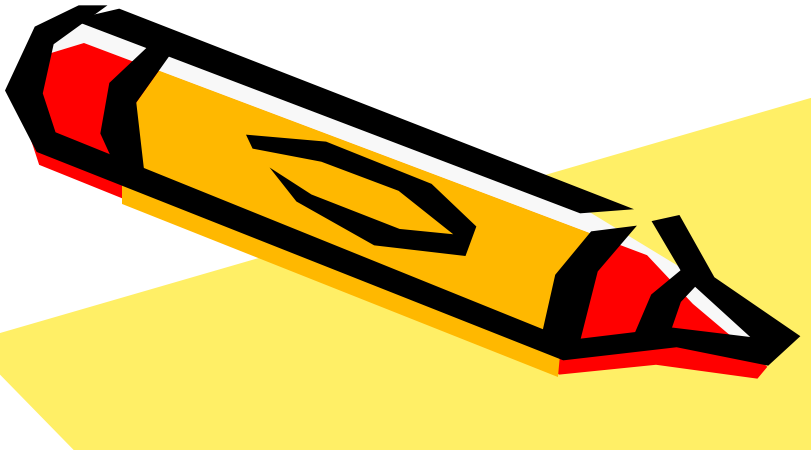


Geometry

Measuring Segments

Measuring Segments

AB (no segment bar or icon above it) stands for the measurement of segment AB, or the distance from point A to point B.

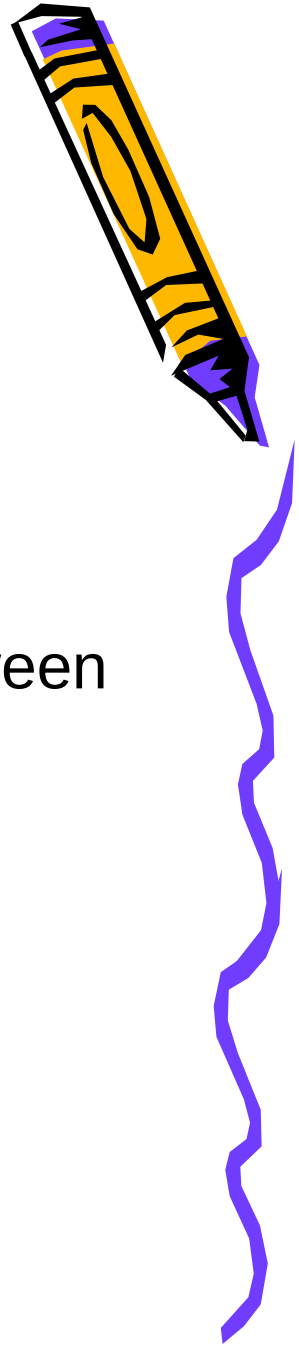
Segments are congruent ($\cong$)

<u>if and only if</u>

they have equal measurements.

$\overline{AB} \cong \overline{CD}$ $\qquad$ $AB = CD$

Measuring Segments



The distance between 2 points on the number line is the absolute value of their difference.

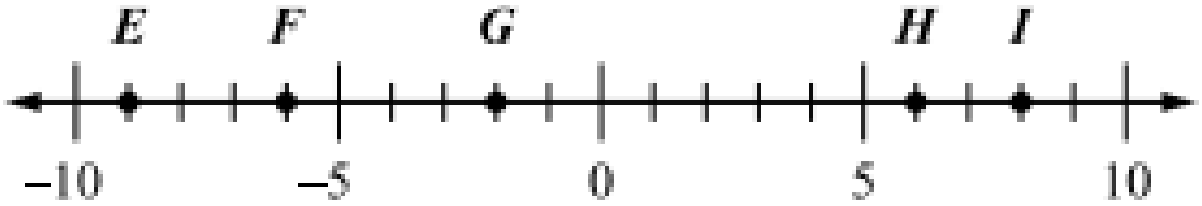
The distance between 5 and 32 =

$|5 - 32| = 27$

The distance between 18 and -7 =

$|18 - (-7)| = 25$

Measuring Segments



Find:

1) HI
2) EH
3) HF
4) GE

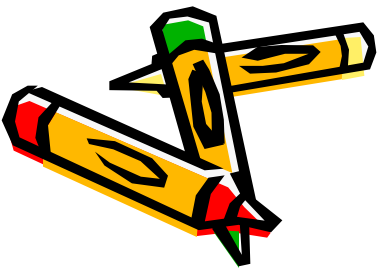
Measuring Segments

The distance between 2 points on the coordinate plane can be found by using the Distance Formula.

Distance Formula

If $A(x_1, y_1)$ and $B(x_2, y_2)$ are points in a coordinate plane, then the distance between A and B is:

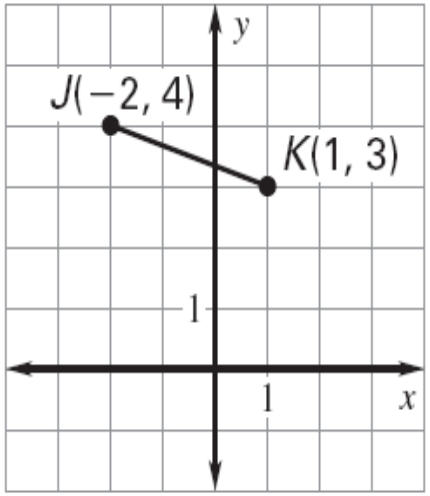
$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$



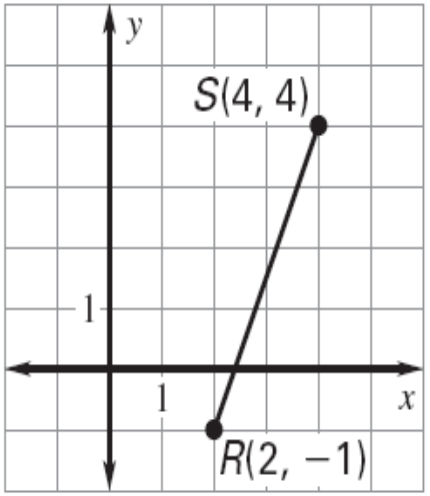
Examples

Find the length of the segment. Round to the nearest tenth of a unit.

16.



17.

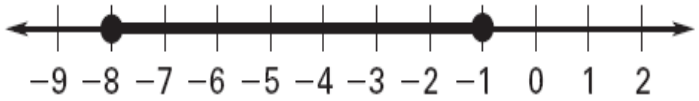


Practice

Find the length of the segment.

20.

21.



The endpoints of two segments are given. Find each segment length. Tell whether the segments are congruent.

22. $\overline{AB}$: $A(2, 6)$, $B(0, 3)$

$\overline{CD}$: $C(-1, 0)$, $D(1, 3)$

23. $\overline{RS}$: $R(5, 4)$, $S(0, 4)$

$\overline{TU}$: $T(-4, -3)$, $U(-1, 1)$