

*HAP 2.1 Distance and Midpoint Formulas***Formulas for 2 points**

If there are two points (a, b) and (c, d) :

- Distance Formula:

- Midpoint Formula:

- Point-slope form of the line:

- Find the distance between the points $(-3, 7)$ and $(4, 10)$.
 - Find the midpoint between the points $(-3, 7)$ and $(4, 10)$.
 - Find the equation of the line that goes through $(-3, 7)$ and $(4, 10)$
- Consider points $A = (-2, 2)$, $B = (2, -1)$, and $C = (5, 4)$
 - $AB =$
 - $BC =$
 - $AC =$
 - Determine whether the triangle formed by points $A = (-2, 2)$, $B = (2, -1)$, and $C = (5, 4)$ form a right triangle.
- Let M be the midpoint of $\overline{P_1P_2}$ where $P_1(6, -3)$ and $P_2(4, 2)$.
 - Find the coordinates of M , the midpoint of the line segment joining the points $P_1 = (6, -3)$ and $P_2 = (4, 2)$.
 - Find the length of $\overline{P_1M}$

$$\overline{82}\sqrt{}\left(\frac{1}{2}\right)\overline{43}\sqrt{}\left(\frac{1}{2}\right)\cdot\overline{2}\left(\frac{1}{2}\right)\left(4-x\right)^{\frac{1}{2}}=0\text{I}-\text{y to }\left(3+x\right)^{\frac{1}{2}}=\overline{7}-\text{y}\left(\frac{1}{2}\right)\left(\frac{1}{2},\frac{1}{2}\right)\left(\frac{1}{2}\right)\overline{82}\sqrt{}\left(\frac{1}{2}\right)$$

$$\overline{2}\sqrt{}\left(\frac{1}{2}\right)\left(\frac{1}{2}\right)\overline{M}\left(\frac{1}{2}\right)\text{etms zi CBA}\Delta\text{ or }0\overline{2}>3\overline{2}=4\overline{3}+\overline{5}\left(\frac{1}{2}\right)$$