

1.3 Midpoint & Distance Formulas

Lesson Title

Date

TASKS	Distance Formula
<p>Task 3 Midpoint of AC, Find AB.</p> <p> $A \quad 5x \quad B \quad 3x+4 \quad C$ $Sx = 3x+4 \quad S(2) + 3(2) + 4$ $2x = 4 \quad 10 + 6 + 4$ $x = 2$ $AC = 20u$ </p>	<p>Distance Formula (x_1, y_1) (x_2, y_2) in a coordinate plane $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$</p> <p>Task 1 $A(-5, 6)$ $B(3, 2)$ x_1, y_1 x_2, y_2</p> <p> $d = \sqrt{(3 - (-5))^2 + (2 - 6)^2} = \sqrt{(8)^2 + (-4)^2} = \sqrt{64 + 16}$ $= \sqrt{80} = 4\sqrt{5}$ </p>
<p>Task 4</p> <p> $X \quad 2 \quad M \quad 6 \quad Y \quad 10$ (x_1, y_1) (x_2, y_2) $b = \frac{2+x_2}{2} \quad 1 = \frac{7+y_2}{2}$ $12 = 2+x_2 \quad 2 = 7+y_2$ $10 = x_2 \quad -5 = y_2$ $Y(10, -5)$ </p> <p>Task 5</p> <p> $T \quad 5x-15 \quad S \quad 5x-15 \quad V \quad 150$ $2(5x-15) = 150 \quad TS \& SV = 75m$ $5x-15 = 75 \quad X = 16$ $Sx = 90 \quad TV = 150m$ </p>	<p>Midpoint Formula - average of the two endpoints $M \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$</p> <p>Task 2 $P(-8, 3)$ $Q(-2, 7)$ x_1, y_1 x_2, y_2</p> <p> $M \left(\frac{-8-2}{2}, \frac{3+7}{2} \right) = \left(\frac{-10}{2}, \frac{10}{2} \right) = (-5, 5)$ </p>

Still need help with: