

Algebra 201-007-50 C1

Quiz 4

September 18, 2008

Name: SOLUTIONS

Student Number:

1. (2 points) Find the midpoint of the line segment between the points $(-4, -2)$ and $(2, 5)$.

$$\begin{aligned}(x_m, y_m) &= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{-4 + 2}{2}, \frac{-2 + 5}{2} \right) \\ &= \left(-1, \frac{3}{2} \right)\end{aligned}$$

2. (8 points) Find the equation of the line that passes through the point (4, 6) and is parallel to $10x - 5y = 6$.

SLOPE:

$$10x - 5y = 6$$

$$-5y = -10x + 6$$

$$y = \frac{-10}{-5}x + \frac{6}{-5}$$

$$y = 2x - \frac{6}{5}$$

$$\therefore m = 2$$

$$y = mx + b$$

$$6 = 2(4) + b$$

$$6 = 8 + b$$

$$6 - 8 = b$$

$$-2 = b$$

$$\therefore y = 2x - 2$$