

MPM 2D0 – Unit 2 Quiz #1

Name Answers

No Calculators

K /10

C /3

1. a) Determine the equation of the line perpendicular to $2x+3y=7$ and sharing the same x -intercept as $4x-3y+8=0$. Express your answer in $y=mx+b$ form. 3K

$$\begin{aligned} 3y &= -2x+7 \\ y &= -\frac{2}{3}x+7 \\ m_{\perp} &= \frac{3}{2} \checkmark \end{aligned}$$

$$\begin{aligned} 4x+8 &= 0 \\ 4x &= -8 \\ x &= -2 \\ (-2, 0) &\checkmark \end{aligned}$$

$$y = \frac{3}{2}(x+2)$$

$$y = \frac{3}{2}x + 3 \checkmark$$

- b) Restate your answer to part a) in standard form. 2K

$$3x - 2y + 6 = 0 \quad \checkmark$$

2. Evaluate as an exact value. 2K

a) $\sqrt{\frac{36}{49}} = \frac{6}{7} \checkmark$

b) $\sqrt{1.44} = 1.2 \checkmark$

3. Simplify to a single mixed radical. 3K

a) $\sqrt{45} = 3\sqrt{5} \checkmark$

b) $\begin{aligned} &3\sqrt{8} + \sqrt{98} - 2\sqrt{18} \\ &= 6\sqrt{2} + 7\sqrt{2} - 6\sqrt{2} \checkmark \\ &= 7\sqrt{2} \checkmark \end{aligned}$