

Date: _____ Block: _____ Name: _____

MATH HONORS 2: UNIT 1 QUIZ 1

Score: _____ / 30 marks → _____ %

1. Fill in the properties of real numbers that have occurred in each of the following steps: **(2M)**

(i) $2\left[\frac{1}{2}(-4+n+4)\right] = 2\left[\frac{1}{2}(-4+4+n)\right]$ _____

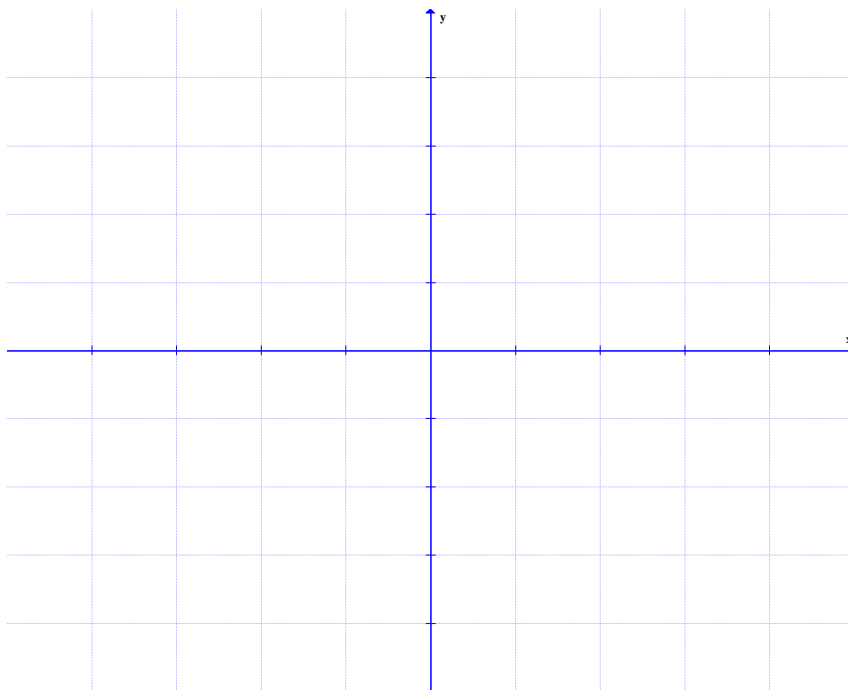
(ii) $2\left[\frac{1}{2}(-4+4+n)\right] = 2\left[\frac{1}{2}(0+n)\right]$ _____

(iii) $2\left[\frac{1}{2}(n)\right] = \left[2\left(\frac{1}{2}\right)\right](n)$ _____

(iv) $1(n) = n$ _____

2. (a) Evaluate for m : $m = 8 - 4(-7 + 3 \cdot 2^2)$ **(5M)**(b) To which number set(s) does m belong.

{Natural Numbers, Integers, Rational Numbers, Irrational Numbers, Real Numbers}

(c) Graph the line $4x + 8y = m$.

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3. Solve for x : and verify your solution(s)

(5M)

$$|x+7|+1=4-2(5-x)$$

4. Solve for x , leaving your answer in terms of A , B , C , and D :

(3M)

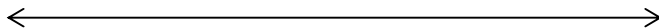
$$\frac{Ax-B}{C}=2x+D$$

5. (a) Solve for x , giving your answer in **interval** notation:

(4M)

$$3x \leq 2x-1 < x+1$$

(b) Graph the solution set on a real number line.



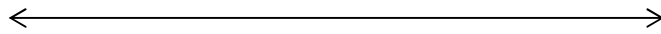
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6. (a) Solve for x , giving your answer in **set notation**:

(4M)

$$\left| \frac{4x+1}{3} \right| \geq 1$$

- (b) Graph the solution set on a real number line.



7. Two long-distance telephone companies are competing for clients. Speedy Network has a \$41.35 installation fee, and then charges \$0.157 cents per minute of long-distance phone calls. Planet Communications has a \$24.99 installation fee and then charges \$0.173 per minute of long-distance phone calls. How many minutes of long-distance phone calls would be required for Speedy Network to cost less than Planet Communications? Round your answer to three significant figures. **(4M)**

8. Find p such that $y = \frac{2}{3}x + 1$ is perpendicular to the line passing through the coordinates $(p, 2)$ and $(-1, p+1)$. **(3M)**