

Math 40 - Quiz #3

Be sure to use PROPER mathematical notation and **show some steps**. Use back of page if needed.
Leave answers as reduce fractions if needed.

1. Simplify completely using order of operations,

4 a.
$$\begin{aligned} &|-5 \cdot \underline{2^3} + 2 \cdot \underline{3^2}| - 2 \\ &= |-5 \cdot \underline{8} + 2 \cdot \underline{9}| - 2 \\ &= |-40 + 18| - 2 \\ &= |-22| - 2 \\ &= 22 - 2 \\ &= \boxed{20} \end{aligned}$$

$$\begin{array}{r} 34\overset{1}{0} \\ -18 \\ \hline 22 \end{array}$$

4 b.
$$\begin{aligned} \frac{30 - 4|6 - 4(3 - 2)|}{4^2 + 2(-6)} &= \frac{30 - 4|6 - 4(1)|}{16 - 12} \\ &= \frac{30 - 4|2|}{4} \\ &= \frac{30 - 8}{4} \\ &= \frac{22}{4} \\ &= \boxed{\frac{11}{2}} \end{aligned}$$

2. Draw a line to the property being demonstrated

Distributive Property

Associative Property of Multiplication

Commutative Property of Addition

~~Associative Property of Addition~~

Additive Identity

~~Additive Inverse~~

$$7(4 \cdot 6) = (7 \cdot 4) \cdot 6$$

$$\frac{-1}{13} + 0 = \frac{-1}{13}$$

$$3\left(\frac{1}{2}x - 4\right) = \frac{3}{2}x - 12$$

$$-4 + 6 = 6 + (-4)$$