

Quiz 6

Name: _____

Total Points possible: 10

Math 12: Spring 2025

Instructions: Each question is worth 3 points but the last question. Question 3 is worth 1 point. **Show all your work in order to receive credit.**

Problem 1. Distribute and simplify.

(a) $4(3x + y - 7z + v^0)$

$v^0 = 1$

$$4(3x) + 4y - 4(7z) + 4$$

$$12x + 4y - 28z + 4$$

Problem 2. Simplify with positive exponent.

$$\left(\frac{x^2 b^{-4}}{x^4 b^4} \right)^{-2} = \left(\frac{x^2 b^{-4}}{x^2 \cdot x^2 b^4} \right)^{-2}$$

$$= \left(\frac{b^{-4}}{x^2 b^4} \right)^{-2}$$

$$= \left(\frac{1}{x^2 b^4 b^4} \right)^{-2}$$

$$= \left(\frac{1}{x^2 b^8} \right)^{-2}$$

$$= \left(\frac{1^{-2}}{x^{2(-2)} b^{8(-2)}} \right)$$

$$= \frac{x^{2(2)} b^{8(2)}}{1}$$

$$= x^4 b^{16}$$

Problem 3. Simplify $2x + 10x + 1x$ $\overset{2+10+1=13}{=} 13x$

Problem 4. How do you feel about this quiz?