

## 1.1: Numeracy

Period \_\_\_\_\_

**Evaluate each expression.**

1) 
$$\frac{((-2) + 2 + 2) \cdot 2}{5 - (1 - 4)^2}$$

2) 
$$\frac{18 + (-10) + 5 + ((-1) - 1) \cdot 2}{-3}$$

3) 
$$(-1)^2 - (-4 + |-3|^2) \cdot -6$$

4) 
$$-2 \cdot \frac{18 \cdot 2}{|6|}$$

5) 
$$1 + 5 - (|6| - (5 - 4)^2)$$

6) 
$$-4 \cdot 3 + 6(|2| + (-2)^2)$$

**Solve each equation.**

7) 
$$7(-7n + 3) = 413$$

8) 
$$5(3r + 2) = -95$$

9) 
$$8(3m + 1) = -184$$

10) 
$$2(-6x + 4) - 8x = 168$$

11) 
$$-2(2 + v) = 31 + 3v$$

12) 
$$-5(1 + 7b) = -5 - 5b$$

**Simplify each expression.**

13) 
$$\frac{25}{4} + \frac{9}{25}$$

14) 
$$\frac{2}{25} - \frac{1}{2}$$

15) 
$$\frac{9}{5} \cdot \frac{16}{18}$$

$$16) \frac{\frac{4}{3}}{\frac{9}{2}}$$

**Simplify. Your answer should contain only positive exponents.**

$$17) 2a^3b^{-4} \cdot 4b^{-2}$$

$$18) 3x^3y^0 \cdot 4x^4y^2$$

$$19) (yx^0 \cdot 2x^{-4}y^2)^{-1}$$

$$20) 2vu^2 \cdot (2u^3v^3)^0$$

$$21) \frac{2x^{-4}y^3}{2x^{-4} \cdot 4x^2y^4}$$

$$22) \frac{2v^{-2}}{4vv^2}$$

$$23) \frac{x^2y^3}{(2x^{-2}y^3)^2 \cdot 2yx^{-1}}$$

$$24) \frac{2x^0y^{-2} \cdot 2x^{-4}y^0}{(yx^{-1})^{-3}}$$

**Simplify. Use absolute value signs when necessary.**

$$25) \sqrt{100x}$$

$$26) \sqrt{75m^3}$$

$$27) \sqrt{448x^2}$$

$$28) \sqrt{20p^3}$$

$$29) \sqrt{18n}$$

$$30) \sqrt{256x^2}$$

$$31) \sqrt[4]{243x}$$

$$32) \sqrt[3]{250b^5}$$