

Unit 1: Review – Integers & Rationals [NO CALCULATORS]**1.2 Order of Operations**B racketsE xponentsD ivisionM ultiplicationA dditionS ubtraction

] as a group left to right

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$$x^3 = x \cdot x \cdot x$$

Ex. Evaluate:

a) $3 + 2(-4)$

$$= 3 + (-8)$$

$$= \boxed{-5}$$

b) $-2 - 10(-1) \div 2$

$$= -2 - (-10) \div 2$$

$$= -2 + (+5)$$

$$= \boxed{3}$$

c) $(-7 + (-3)) \div (-5) + (-6)$

$$= -10 \div (-5) + (-6)$$

$$= 2 + (-6)$$

$$= \boxed{-4}$$

d) $-3(2 - 5(2 - 8))$

$$= -3(2 - 5(-6))$$

$$= -3(2 + (+30))$$

$$= -3(32)$$

$$= \boxed{-96}$$

e) $\frac{-3(2+3)}{4(-3)+7}$

$$= \frac{-3(5)}{-12+7}$$

$$= \frac{-15}{-5}$$

$$= \boxed{3}$$

Exponents

Recall:

$$3^2 = 3 \times 3 = 9$$

base

exponent

Do brackets matter?

Ex. $(-4)^2$

$$= (-4) \times (-4)$$

$$= 16$$

vs.

$$-4^2$$

$$= -1 \times 4^2$$

$$= -1 \times 4 \times 4$$

$$= -16$$

Ex. $(-3)^3$

$$= (-3) \times (-3) \times (-3)$$

$$= -27$$

vs.

$$-3^3$$

$$= -1 \times 3 \times 3 \times 3$$

$$= -27$$

Ex. Evaluate:

a) $2(3 - 5^2)$

$$= 2(3 - 25)$$

$$= 2(-22)$$

$$= -44$$

b) $-(3^2) + 2(4)$

$$= -9 + 8$$

$$= -1$$