

math 20 - Tues, 1/31

Please turn in Take-home quiz 2 (if you haven't already)

Return papers - explain recovery work
→ Questions

Finish 2.4 - exponents with negatives

2.6

3.1

Assignment 2 handed out (team)

Quiz 4 on Thursday (2.1-2.5)

Midterm 1 on Thursday, Feb 9

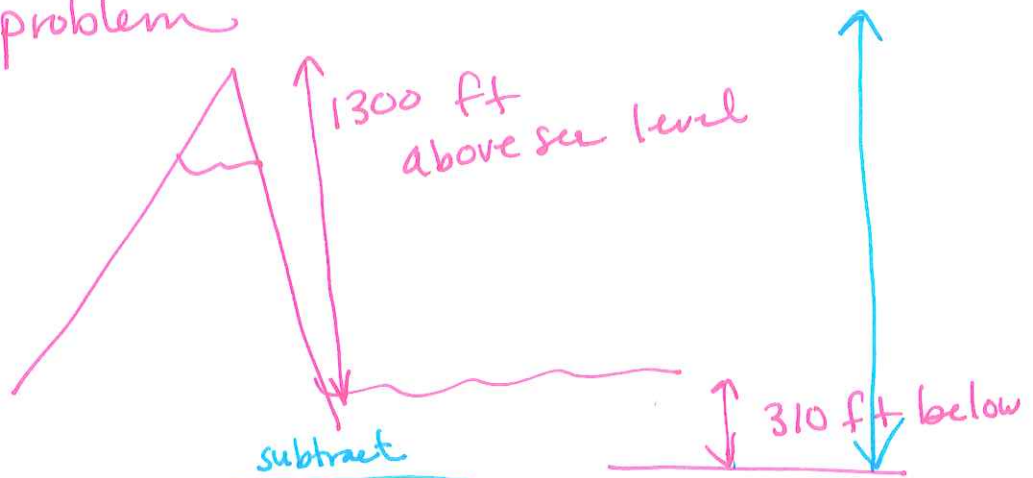
Review Packet handed out
on Thursday

Questions

$$\begin{aligned} & 8 - 7[8 - (3 + 4 \cdot 3)] \\ &= 8 - 7[8 - (3 + 12)] \\ &= 8 - 7[8 - 15] \\ &= 8 - 7[-7] \\ &= 8 - (-49) \qquad 8 - 7[-7] \\ &= 57 \qquad \qquad \qquad 8 + 49 \end{aligned}$$

P
E
MD
AS

word problem



what's the difference
in elevation?

$$1300 - (-310)$$
$$= 1610 \text{ ft}$$

$$\begin{array}{r} 1300 \text{ ft} + 310 \text{ ft} \\ 310 \\ \hline 1,610 \text{ ft} \end{array}$$

The difference is 1,610 ft

Add on to 2.4

Exponents with negatives

$$3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$$

-3^5 base is 3
↓
 $-3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$
 ↓ ↓ ↓
 9 9 3
 81 3
-243

with ()
odd power
negative answer

$$(-3)^5$$

base is -3

$$(-3)(-3)(-3)(-3)(-3)$$

-243

-3^4
↓
 $-3 \cdot 3 \cdot 3 \cdot 3$
-81

even power
positive answer

$$(-3)^4$$
$$(-3)(-3)(-3)(-3)$$

81

Examples:

$$(-2)^2 = 4$$

$(-2)(-2)$

$$-6^2 = -36$$

$(-4)^3$ "negative 4" cubed

$$-4^3 = -64$$

"opposite of 4^3 "

$$(-1)^{100} = 1$$

$$-1^{101} = -1$$

$$(-3)^2 = 9$$

Section 2.6 - Order of Operations with Integers

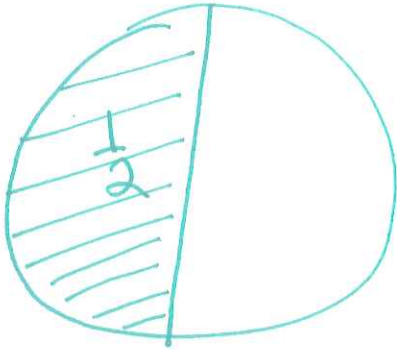
Examples:

$$\begin{aligned} \textcircled{1} \quad & -3 + (4-8)^2 \\ & = -3 + (-4)^2 \\ & = -3 + (-4)(-4) \quad \text{optional step} \\ & = -3 + 16 \\ & = 13 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & -6(-3)^2 - (-9) \\ & = -6(9) + 9 \\ & = -54 + 9 \\ & = -45 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & \frac{-18 + 6(-2)}{52 - (-7)^2} \qquad (-7)(-7) = 49 \\ & = \frac{-18 + (-12)}{52 - 49} \\ & = \frac{-30}{3} \\ & = -10 \end{aligned}$$

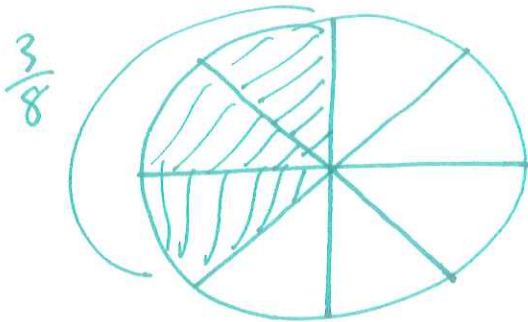
Section 3.1 - Intro to Fractions



$$\frac{1}{2}$$

one number

$\frac{\text{part}}{\text{\# of parts in the whole}}$



$$\frac{3}{8}$$

$\frac{\text{numerator}}{\text{denominator}}$
"down"