What's Going On?

Checking In

Minds on Integer Mastery Test Take-up

Action! Using Algebra to Solve Problems

Consolidation Textbooks and Homework Time

Learning Goal - I will learn how to use algebra to solve real-world problems.

Simplify.

$2 - (-5) - (4 - 10)^2 \div 12 \times 2 - 3^2$

$= 2 + 5 - (-6)^2 \div 12 \times 2 - 9$

$(-6)(-6)$

$= 2 + 5 - 36 \div 12 \times 2 - 9$

$= 2 + 5 - 3 \times 2 - 9$

$= 2 + 5 - 6 - 9$

$= 7 - 6 - 9$

$= 1 - 9$

$= -8$

Mastering Integers

We will have two "mastery" tests.

These will test your ability to perform basic operations on integers.

The first one is practice, the second one counts for marks.

Taking up the first mastery test

$$(-4) + (-2)$$

$$= -4 - 2$$

$$= -6$$

When we add a negative, we subtract!

$$(7) + (-15)$$

$= 7 - 15$

$= -8$

When we add a negative, we subtract!

$$(-8) - (3)$$

$= -8 - 3$

$= -11$

Just drop the brackets and subtract!
When we start with negative and THEN subtract, our answer will be MORE NEGATIVE

$$(-5) - (-2)$$

When we subtract a negative, we ADD!!!

$= -5 + 2$

$= -3$

$$-4 \times -4$$

$$= +16$$

When we multiply two negative numbers, the result is ALWAYS positive!

$$6 \times (-9)$$

$= -54$

When we multiply a positive and a negative, the result is ALWAYS negative.

$$56 \div -8$$

$= -7$

If you divide a positive and negative, the answer is negative.

If you divide a negative and a positive, the result is always negative!

$$\frac{-36}{6}$$

$$= -6$$

$$6 + (-10) - 2$$

When we add a negative, we subtract!

$$= 6 - 10 - 2$$

$$= -4 - 2$$

$$= -6$$

Now we do ALL of the addition and subtraction from left to right.

$$15 - (-3) - 5 + 4$$

$$= 15 + 3 - 5 + 4$$

$$= 18 - 5 + 4$$

$$= 13 + 4$$

$$= 17$$

Now we do ALL of the addition and subtraction from left to right.

$$-13 - 12 - (-10)$$

When we subtract a negative we add.

$$= -13 - 12 + 10$$

Now we do ALL of the addition and subtraction from left to right.

$$= -25 + 10$$

$$= -15$$

$$(-3)(-5)(-4)$$

$$= -60$$

When we multiply several integers together, we get a NEGATIVE when we have an ODD number of negative signs!

Over the holidays I bought a jacket from a Gap Factory Outlet store in Belleville.

The jacket was originally priced at $100. Because it was at the outlet store it was marked down 70%. → $30

The jacket was then on clearance to make room for new merchandise. It was an additional 20% off. the sale price.

How much did I pay for the jacket?

$10 $6 $24

20% of 30,

$0.20 \times 30 = 6$

The jacket is discounted an additional $6

∴ $24

What a Bargain!

Susan buys a tennis racket from a store.

- The tennis racket's original price is $75.
- All tennis rackets are on sale for 25% off the original price.
- The tennis racket has a scratch, so she receives an additional 10% off the sale price

How much does Susan pay for her tennis racket, including 13% tax?

Show your work.

Sale Price

S is sale price
P is original price

discount

$S = 1P - 0.25P$

$S = 0.75P$

$S = 0.75(75)$

$S = 56.25$

The sale price is $56.25

f is final price after 10% discount

$f = s - 0.10s$ 10% discount

$f = 0.90s$ remember, s is the sale price

$f = 0.90(56.25)$

$f = 50.63$

The price b4 tax is $50.63.

t is the total cost after tax

price before tax

$t = 1f + 0.13f$

tax on our purchase

$t = 1.13f$

total with tax

$t = 1.13(50.63)$

$t = 57.21$