INTEGER RULES

Absolute value – The distance a number is from **0 on the number line. EX: $|-5| = 5$ and $|+5| = 5$

INTEGERS: The set of positive and negative WHOLE numbers and "0", {. . . -4,-3,-2,-1,0,1,2,3,4 . .. }

Add Integers

Same sign –add and keep the sign

If the signs are the same, add the numbers and keep the sign.

(+3) + (+2) = (+5)
(+) + (+) = (+)

(-3) + (-2) = (-5)
(-) + (-) = (-)

Different sign- subtract and keep sign of the number with the largest absolute value (the number that is the biggest without the sign) (*different* sign find the *difference*)

(-8) + (+2) = (-6)

(+8) + (-2) = (+6)

Subtract Integers

(Keep, Change, Change)

You do not subtract, you add the opposite of the number.

1) **Keep – the sign of the first number in the problem**
2) **Change – the subtraction (-) sign to an addition (+) sign**
3) **Change the sign of the number behind the subtract to it's opposite (Change a negative to a positive and a positive to a negative)**
4. **Use the rules for adding integers.**

Ex: (-7) – (-4) =
K C C
(-7) + (+4) = -3

Multiply Integers

If the signs are the same, you multiply and the product is positive.

Same sign = positive (+)
(+) • (+) = (+)
(-) • (-) = (+)
(-4) • (-2) = (+8)

If the signs are different, you multiply and the product is negative (-).

Different signs = negative (-)
(+) • (-) = (-)
(-) • (+) = (-)
(-4) • (+2) = (-8)

**** In problems with more than two factors, an even number of negatives (2, 4) will be a positive answer. An odd number (1,3,5) will be a negative answer.**

Divide Integers

If the signs are the same, you divide and the quotient is positive.

Same sign = positive (+)
(+) ÷ (+) = (+)
(-) ÷ (-) = (+)
(-4) ÷ (-2) = (+2)

If the signs are different, you divide and the quotient is negative (-).

Different signs = negative (-)
(+) ÷ (-) = (-)
(-) ÷ (+) = (-)
(-8) ÷(+2) = (-4)

**** In problems with more than two factors, an even number of negatives (2, 4) will be a positive answer. An odd number (1,3,5) will be a negative answer.**