

INTEGER Notes

Integers are the counting number (whole numbers) and their opposites.

Positive integers (we **do not** use a + sign) EX. 2, 3, 4

Negative integers (use a negative sign) EX. -2, -3, -4

Rules for Adding Integers

Same sign, add the numbers, use that sign EX $2+2=4$ EX. $-2 + -4 = -6$

Different signs, subtract numbers, use sign of higher number EX. $-2 + 7 = 5$ EX. $-9 + 3 = -6$

Rules for Subtracting Integers

① Change the minus sign to a plus, ② change the sign of second number to its opposite, ③ then follow the addition rules. EX. $-4 - -3 =$

$$-4 - -3 = \longrightarrow -4 + 3 = -1$$

$$\text{EX. } -7 - 2 = \longrightarrow -7 + -2 = -9$$

Rules for Multiplication of Integers and Division of Integers

Same signs the answer is positive EX. $5 \times 4 = 20$ $-7 \times -2 = 14$ $-15 \div -3 = 5$

Different signs the answer is negative EX. $-20 \div 5 = -4$ $-4 \times 2 = -8$

Comparing Integers

A positive integer is always greater than a negative integer. EX. $65 > -12$

The higher the negative integer the lower the number. EX. $-75 < -5$

Zero is greater than any negative number. EX. $-18 < 0$