

Subtraction of Integers

Principle of Signs: $(+2) = ++$ $(-3) = ---$

Principle of Opposites: $(+5) + (-5) = 0$ $(-8) + (+8) = 0$

Change Subtraction to Addition then

Change 2nd number to Opposite sign & **Combine!**

$$(+2) - (+9) = -7 \quad (+3) - (-6) = \underline{\quad}$$

$$(-3) - (-8) = +5 \quad (-2) - (+8) = \underline{\quad}$$

$$(+4) - (-6) = +10 \quad (+5) - (+7) = \underline{\quad}$$

$$(-5) - (+7) = -12 \quad (-4) - (-9) = \underline{\quad}$$

Multiplication of Integers

Principle of Signs: $(+5) = + + + + +$ $(-2) = --$

Principle of Opposites: $(+1) + (-1) = 0$ $(-2) + (+2) = 0$

Signs are **alike**, Multiply and result is **(+)**!

Signs are **differ**, Multiply and result is **(-)**!

$$(+2) \times (+9) = +18 \quad (+3) \times (-6) = \underline{\quad}$$

$$(-3) \times (-8) = +24 \quad (-2) \times (+7) = \underline{\quad}$$

$$(+4) \times (-7) = -28 \quad (+5) \times (+8) = \underline{\quad}$$

$$(-5) \times (+6) = -30 \quad (-4) \times (-9) = \underline{\quad}$$

Division of Integers

Principle of Signs: $(+4) = + + + +$ $(-3) = ---$

Principle of Opposites: $(+6) + (-6) = 0$ $(-9) + (+9) = 0$

Signs are **alike**, Divide and result is **(+)**!

Signs are **differ**, Divide and result is **(-)**!

$$(+6) \div (+2) = +3 \quad (+28) \div (-7) = \underline{\quad}$$

$$(-12) \div (-3) = +4 \quad (-12) \div (+6) = \underline{\quad}$$

$$(+8) \div (-4) = -2 \quad (+27) \div (+9) = \underline{\quad}$$

$$(-25) \div (+5) = -5 \quad (-40) \div (-8) = \underline{\quad}$$

Sentences to Integers

Word Sentences to Integer Values

- Withdraw \$40 from ATM machine **- \$40**
- Hiking up a hill from 120ft to 580ft
- An Altitude above Sea Level of 275 ft
- Temperature of 40 degrees below zero
- Receiving a raise of \$50 per week
- A football team has **net gain** of 65yards **+65 yards**

Combining Integers

Combining Integers or Signed Numbers

Combine by Sign! **Apply** Principle of Opposites!

- $-32, -6, 22, 0, 17, -21, 6, 28 = (+73) + (-59) = +14$
- $-14, 31, -69, 47, 27, -41 = (+ ?) + (- ?) = \underline{\quad}$
- $-8, -32, 0, 10, 21, -11, 31 = (+62) + (-51) = +11$
- $-9, -14, 5, 0, 29, -19, -36 = (+ ?) + (- ?) = \underline{\quad}$

Cartesian System

Developed by a French Philosopher, **Rene Descartes!**

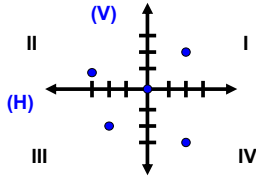
Created from **Horizontal & Vertical** number lines!

Used to **locate positions** on a 2D plane region!

Basis of our modern **Global Positioning System!**

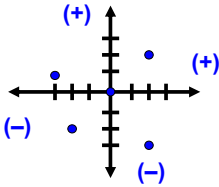
Also, called a **Rectangular Coordinate System!**

Coordinate System



A Cartesian Coordinate System has four major parts:
H & V Axis, Origin, Four Quadrants, Ordered Pairs

Plotting Points



Procedure to Plot Points: Start at Origin,
Go Right (+) or Go Left (-), Go Up (+) or Go Down (-)!

Conclusion
