

Beginning Numbers * Grouped Integers 1 A

Fundamental Operations: Addition, Subtraction, Multiplication, Division with Integers

Principle (Rule) of Signs: $(+3) = + + +$ $(-4) = - - - -$ $(+5) = + + + + +$ $(-2) = - -$

Principle of Opposites: $(+3)+(-3) = 0$ $(-4)+(+4) = 0$ $(+5)+(-2) = +3$ $(+3)+(-7) = -4$

Addition (Combining of Signs)

Same Signs => Combine Values then Common Sign! Different Signs => Cancel Values then Sign of Result!

$$(+2) + (+9) = +11$$

$$(+3) + (-6) = -3$$

$$(-3) + (-7) = -10$$

$$(-2) + (+7) = +5$$

$$(+4) + (-8) = -4$$

$$(+5) + (+9) = +14$$

$$(-5) + (+6) = +1$$

$$(-4) + (-8) = -12$$

Subtraction (Add the Opposite!)

Change Subtraction to Addition **then** Change Sign of Second Number to Opposite Sign then Combine!

$$(+2) - (+9) = -7$$

$$(+3) - (-7) = +10$$

$$(-3) - (-8) = +5$$

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

$$(+4) - (-6) = +10$$

$$(+5) - (+8) = -3$$

$$(-5) - (+7) = -12$$

$$(-4) - (-9) = +5$$

Multiplication (Same Signs (+) & Different Signs (-))

Multiply then If Signs are the Same then Result is (+)!

Multiply then If Signs are Different then Result is (-)!

$$(+2) \times (+9) = +18$$

$$(+3) \times (-6) = -18$$

$$(-3) \times (-8) = +24$$

$$(-2) \times (+7) = -14$$

$$(+4) \times (-7) = -28$$

$$(+5) \times (+8) = +40$$

$$(-5) \times (+6) = -30$$

$$(-4) \times (-9) = +36$$

Division (Same Signs (+) & Different Signs (-))

Divide then If Signs are the Same then Result is (+)! Divide then If Signs are Different then Result is (-)!

$$(+6) \div (+2) = +3$$

$$(+28) \div (-7) = -4$$

$$(-12) \div (-3) = +4$$

$$(-12) \div (+6) = -2$$

$$(+8) \div (-4) = -2$$

$$(+27) \div (+9) = +3$$

$$(-15) \div (+5) = -3$$

$$(-16) \div (-8) = +2$$

Beginning Numbers * Grouped Integers 1 B

Fundamental Operations: Addition, Subtraction, Multiplication, Division with Integers

Principle of Signs: $(+4) = + + + +$ $(-3) = - - - -$ $(+2) = + +$ $(+5) = - - - - -$

Principle of Opposites: $(+3)+(-3) = 0$ $(-4)+(+4) = 0$ $(+5)+(-2) = +3$ $(+3)+(-7) = -4$

Addition (Combining of Signs!)

Same Signs => Combine Values then Common Sign! Different Signs => Cancel Values then Sign of Result!

$$(+2) + (+6) = +8$$

$$(+3) + (-8) = -5$$

$$(-3) + (-7) = -10$$

$$(-2) + (+9) = +7$$

$$(+4) + (-9) = -5$$

$$(+5) + (+7) = +12$$

$$(-5) + (+8) = +3$$

$$(-4) + (-6) = -10$$

Subtraction (Add the Opposite!)

Change Subtraction to Addition then Change Sign of Second Number to Opposite Sign then Combine!

$$(+2) - (+7) = -5$$

$$(+3) - (-9) = +12$$

$$(-3) - (-6) = +3$$

$$(-2) - (+8) = -10$$

$$(+4) - (-8) = +12$$

$$(+5) - (+6) = -1$$

$$(-5) - (+9) = -14$$

$$(-4) - (-7) = +3$$

Multiplication (Same Signs (+) & Different Signs (-))

Multiply then If Signs are the Same then Result is (+)!

Multiply then If Signs are Different then Result is (-)!

$$(+2) \times (+6) = +12$$

$$(+3) \times (-9) = -27$$

$$(-3) \times (-7) = +21$$

$$(-2) \times (+8) = -16$$

$$(+4) \times (-8) = -32$$

$$(+5) \times (+7) = +35$$

$$(-5) \times (+9) = -45$$

$$(-4) \times (-6) = +24$$

Division (Same Signs (+) & Different Signs (-))

Divide then If Signs are the Same then Result is (+)! Divide then If Signs are Different then Result is (-)!

$$(+6) / (+3) = +2$$

$$(+21) / (-7) = -3$$

$$(-8) / (-2) = +4$$

$$(-18) / (+6) = -3$$

$$(+12) / (-4) = -3$$

$$(+36) / (+9) = +4$$

$$(-10) / (+5) = -2$$

$$(-24) / (-8) = +3$$

Beginning Numbers * Grouped Integers 1 C

Fundamental Operations: Addition, Subtraction, Multiplication, Division with Integers

Principle (Rule) of Signs: $(+3) = + + +$ $(-4) = - - - -$ $(+5) = + + + + +$ $(-2) = - -$

Principle of Opposites: $(+3)+(-3) = 0$ $(-4)+(4) = 0$ $(+5)+(-2) = +3$ $(+3)+(-7) = -4$

Addition (Combining of Signs!)

Same Signs => Combine Values then Common Sign!

Different Signs => Cancel Values then Sign of Result!

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

$$(-3) + (+9) = +6$$

$$(+3) + (+5) = +8$$

$$(+2) + (-6) = -4$$

$$(-4) + (+7) = +3$$

$$(-5) + (-8) = -13$$

$$(+5) + (-8) = -3$$

$$(+4) + (+7) = +11$$

Subtraction (Add the Opposite!)

Change Subtraction to Addition then Change Sign of Second Number to Opposite Sign then Combine!

$$(-2) - (-6) = +4$$

$$(-3) - (+8) = -11$$

$$(+3) - (+9) = -6$$

$$(+2) - (-9) = +11$$

$$(-4) - (+7) = -11$$

$$(-5) - (-6) = +1$$

$$(+5) - (-8) = +13$$

$$(+4) - (+7) = -3$$

Multiplication (Same Signs (+) & Different Signs (-))

Multiply then If Signs are the Same then Result is (+)!

Multiply then If Signs are Different then Result is (-)!

$$(-4) \times (-8) = +32$$

$$(-4) \times (+6) = -24$$

$$(+2) \times (+9) = +18$$

$$(+2) \times (-7) = -14$$

$$(-5) \times (+6) = -30$$

$$(-5) \times (-9) = +45$$

$$(+3) \times (-7) = -21$$

$$(+2) \times (+8) = +16$$

Division (Same Signs (+) & Different Signs (-))

Divide then If Signs are the Same then Result is (+)! Divide then If Signs are Different then Result is (-)!

$$(-18) \div (-2) = +9$$

$$(-24) \div (+6) = -4$$

$$(+15) \div (+3) = +5$$

$$(+12) \div (-3) = -4$$

$$(-12) \div (+4) = -3$$

$$(-24) \div (-8) = +3$$

$$(+20) \div (-5) = -4$$

$$(+18) \div (+9) = +2$$

Beginning Numbers * Grouped Integers 1 D

Fundamental Operations: Addition, Subtraction, Multiplication, Division with Integers

Principle (Rule) of Signs: $(+3) = + + +$ $(-4) = - - - -$ $(+5) = + + + + +$ $(-2) = - -$
Principle of Opposites: $(+3)+(-3) = 0$ $(-4)+(+4) = 0$ $(+5)+(-2) = +3$ $(+3)+(-7) = -4$

Addition (Combining of Signs!)

Same Signs => Combine Values then Common Sign! Different Signs => Cancel Values then Sign of Result!

$$(-4) + (-5) = -9$$

$$(-4) + (+9) = +5$$

$$(+2) + (+6) = +8$$

$$(+2) + (-7) = -5$$

$$(-5) + (+8) = +3$$

$$(-5) + (-6) = -11$$

$$(+3) + (-7) = -4$$

$$(+4) + (+8) = +12$$

Subtraction (Add the Opposite!)

Change Subtraction to Addition then Change Sign of Second Number to Opposite Sign then Combine!

$$(-2) - (-9) = +7$$

$$(-3) - (+7) = -10$$

$$(+3) - (+7) = -4$$

$$(+2) - (-8) = +10$$

$$(-4) - (+6) = -10$$

$$(-5) - (-5) = 0$$

$$(+5) - (-5) = +10$$

$$(+4) - (+6) = -2$$

Multiplication (Same Signs (+) & Different Signs (-))

Multiply then If Signs are the Same then Result is (+)!

Multiply then If Signs are Different then Result is (-)!

$$(-4) \times (-7) = +28$$

$$(-4) \times (+7) = -28$$

$$(+2) \times (+8) = +16$$

$$(+2) \times (-9) = -18$$

$$(-5) \times (+9) = -45$$

$$(-5) \times (-8) = +40$$

$$(+3) \times (-6) = -18$$

$$(+2) \times (+6) = +12$$

Division (Same Signs (+) & Different Signs (-))

Divide then If Signs are the Same then Result is (+)! Divide then If Signs are Different then Result is (-)!

$$(-14) \div (-2) = +7$$

$$(-19) \div (+8) = -2$$

$$(+15) \div (+3) = +5$$

$$(+10) \div (-5) = -2$$

$$(-20) \div (+4) = -5$$

$$(-24) \div (-6) = +4$$

$$(+15) \div (-5) = -3$$

$$(+35) \div (+7) = +5$$