Integer Operations

Add +	Multiply ×
Subtract −	Divide ÷

Name: _____
Date: Sept. 6
Glue on page _____

Adding Signed Numbers

Same sign: add the absolute value of the numbers. Keep the sign.

Different signs: subtract the absolute value of the numbers. Use the sign of the number with the greater absolute value.

$-3 + (-1) = -4$
same signs → add

$-4 + (-5) = -9$
same signs → add

$6 + (-10) = -4$
different signs → Subtract

$-16 + (+5) = -11$
diff. signs → subtract

$-4 + (-2) + (+6) = 0$
same → add
$-6 + 6$
diff. → subtract

Multiplying Signed Numbers

same signs
$(+) \cdot (+) = +$
$(-) \cdot (-) = +$
positive

different signs
$(+) \cdot (-) = -$
$(-) \cdot (+) = -$
negative

$-3 \times (-1) = 3$
same +

$-4 \times (2) = -8$
different −

$7 \cdot (-3) = -21$
diff. −

$-2 \cdot (+4) = -8$
diff. −

$-4(-2) + 3(-2) = 2$
same + diff. −
$8 - 6$
subtract

steps:
* multiply then determine the sign.

Subtracting Signed Numbers

To subtract signed numbers, add the opposite.

- Keep the first number
- Change the subtraction sign to addition
- Change the sign of the second number
- Follow rules for adding signed numbers

Rewrite & add opposite

$-5 - (-4) = -1$
$-5 + 4$
diff. → subtract

$-1 - (-35) = 34$
$-1 + 35$
diff. → subtract

$10 - (-8) = 18$
$10 + 8$
same → add

$-20 - (+19) = -39$
$-20 + (-19)$
same → add

↑ same rule

Dividing Signed Numbers

$(+) \div (+) = +$
$(-) \div (-) = +$
$(+) \div (-) = -$
$(-) \div (+) = -$

steps:
Divide then determine the sign.

$-30 \div (-6) = 5$
same +

$44 \div 4 = 11$
same +

* $6 \div (-12) = -\frac{1}{2}$
diff. −

$-12 \div (+6) = -2$
diff. −