Name Key
Period _____

Date _____
Integers – Ch. 1 Topic B

Lessons 10, 11, & 12

tiplying & Dividing Integers

Ways to write multiplication:

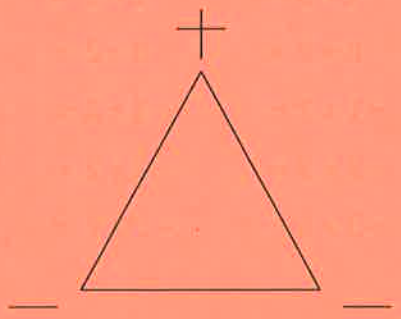
1) x 2) ( )( ) (nothing in between) 3) •

Rules:

Multiply or divide the numbers first!!!

Like signs ----> positive + • + = + − • − = +

Unlike signs -------> negative + • − = − − • + = −



Exercises

a) $-10(7)$ −70 b) $7(10)$ 70 c) $-9(4)$ −36

d) $-8(-6)$ 48 e) $-9(5)$ −36 f) $13(-3)$ −39

g) $-39 \div 3$ −13 h) $18 \div 2$ 6 i) $-16 \div 1$ −16

j) $-25 \div -5$ 5 k) $-15 \div 3$ −5 l) $32 \div -4$ −8

m) $(-3)^2$ (−3)(−3) 9 n) $(-3)(-4)(-2)$ 12(−2) −24 o) $(-1)^2$ (−1)(−1) 1

More Exercises

1) $4(2)$ 8 2) $-6(-7)$ 42 3) $5(-4)$ −20

4) $-21 \div 7$ −3 5) $-16 \div -2$ 8 6) $20 \div -4$ −5

7) $(-5)^2$ (−5)(−5) 25 8) $(-7)(-5)(-3)$ 35(−3) −105 9) $(-2)^2$ (−2)(−2) 4

odd # of negatives = negative answer

even # of negatives = positive answer

Lesson 10, 11, & 12
Problem Set

Date:

1) Complete the problems below.

$3 \cdot 3 =$ 9	$3 \cdot 2 =$ 6	$3 \cdot 1 =$ 3	$3 \cdot 0 =$ 0	$3 \cdot (-1) =$ -3	$3 \cdot (-2) =$ -6
$2 \cdot 3 =$ 6	$2 \cdot 2 =$ 4	$2 \cdot 1 =$ 2	$2 \cdot 0 =$ 0	$2 \cdot (-1) =$ -2	$2 \cdot (-2) =$ -4
$1 \cdot 3 =$ 3	$1 \cdot 2 =$ 2	$1 \cdot 1 =$ 1	$1 \cdot 0 =$ 0	$1 \cdot (-1) =$ -1	$1 \cdot (-2) =$ -2
$0 \cdot 3 =$ 0	$0 \cdot 2 =$ 0	$0 \cdot 1 =$ 0	$0 \cdot 0 =$ 0	$0 \cdot (-1) =$ 0	$0 \cdot (-2) =$ 0
$-1 \cdot 3 =$ -3	$-1 \cdot 2 =$ -2	$-1 \cdot 1 =$ -1	$-1 \cdot 0 =$ 0	$-1 \cdot (-1) =$ 1	$-1 \cdot (-2) =$ 2
$-2 \cdot 3 =$ -6	$-2 \cdot 2 =$ -4	$-2 \cdot 1 =$ -2	$-2 \cdot 0 =$ 0	$-2 \cdot (-1) =$ 2	$-2 \cdot (-2) =$ 4
$-3 \cdot 3 =$ -9	$-3 \cdot 2 =$ -6	$-3 \cdot 1 =$ -3	$-3 \cdot 0 =$ 0	$-3 \cdot (-1) =$ 3	$-3 \cdot (-2) =$ 6

2) Each time that Samantha rides the commuter train, she spends $4 for her fare. Write an integer that represents the change in Samantha's money from riding the commuter train to and from work for 13 days. Explain your reasoning.

$-4(2)(13)$
$-8(13)$
13
8
104
$-104

3) Once a skydiver opens the parachute, the diver descends (falls) at a rate of 5 m/sec. Where will the skydiver be after 4 seconds in relation to where the parachute opened?

$-5(4)$
-20 m

4) A Great White Shark has 3,000 teeth. The shark gains and loses teeth throughout its life. Suppose the shark gains 3 teeth each day for 5 days but doesn't lose any.

a. Write a multiplication problem to show this.

3(5)
15

3000 + 15
3015 teeth

Date:

Lesson 16

Order of Operations

STEPS: PEMDAS

1. Parantheses ( ) [ ] [( )]
2. Exponents $2^3 = 2 \cdot 2 \cdot 2$
3. Multiplication/division left → right
4. Addition/Subtraction left → right

Exercises

Simplify the following expressions.

1. $18 \div (4 + -10)$

$18 \div (-6)$

-3

2. $4 + 20 \div -5$

$4 + (-4)$

0

3. $26 - 7 \times 2 + 3$

$26 - 14 + 3$

$12 + 3$

15

4. $12(-5) + -3(-6)$

$-60 + (18)$

-42

$-60 - 18 = 42$

5. $3^2 + (7 + 3) \times 8 \div 5$

$3^2 + 10 \times 8 \div 5$

$9 + 10 \times 8 \div 5$

$9 + 80 \div 5$

$9 + 16$

25

$80 \div 5 = 16$, $5 \overline{)80}$, 5, 30, 30, 0

6. $-38 - [7 \times (6 + 4)]$

$-38 - [7 \times (10)]$

$-38 - [70]$

$-38 - 70$

-108

7. $6(2^3 - 2^2)$

$2 \cdot 2 \cdot 2$

$6(8 - 4)$

$6(4)$

24

8. $4 + 2^3 - |-4|$

$2 \cdot 2 \cdot 2$

$4 + 8 - 4$

$12 - 4$

8

9. $(20 + 2 \times 8 - 6) \div -6$

16

$(20 + 16 - 6) \div -6$

$(36 - 6) \div -6$

$30 \div -6$

-5

Date:

Lesson 16

Problem Set

Simplify the following expressions.

1. $64 \div 8 - 5 - 13$

$8 - 5 - 13$

$3 - 13$

-10

2. $7 + 42 + (-3) \times 5$

$7 + 42 + (-15)$

$49 + (-15)$

34

3. $[(5 - 34) + 11] \div 3$

$[-29 + 11] \div 3$

$-18 \div 3$

-6

4. $24 \div [(23 - 78) + 62]$

21

-55

$21 \div 7$

3

$78 - 23 = 55$

$62 - 55 = 7$

5. $60 \div 3 + |30| - 18$

$20 + 30 - 18$

$50 - 18$

32

6. $5 + (-7) - (-3) + 2$

$-2 + 3 + 2$

$1 + 2$

3

7. $[11 \times 3 + (-12)] \div 22$

$33 + (-12)$

8. $48 \div (44 + 4)$

$48 \div 48$

1

9. $10(-4) + -7(-3)$

$-40 + 21$

-19

$40 - 21 = 19$