Warm Up:

Simplify:

1) -6 + 11

3) -15 + (-7)

2) 9 - 12

4) -5 - (- 3)

5) -25 - (-7)

6) 65 + (- 3)

Remember!

Integers are the set of whole numbers and their opposites.

Multiplying Integers

The rules for Multiplying and Dividing Integers are VERY different from the rules for adding and subtracting integers.

Multiplying Integers

A Positive Number multiplied by a Negative Number

Rule:

A positive number multiplied by a negative number is a negative!

(+) x (-) = (-)
(-) x (+) = (-)

1 Example

Students type their answers here

-15 x 3

Example

Students type their answers here

8 x -6

Multiplying Integers

A Negative Number multiplied by a Negative Number

Let's look at a table:

We already know that a negative multiplied by a positive is a negative number!

Multiplying Integers

A Negative Number multiplied by a Negative Number

-5 x 3	=	-15
-5 x 2	=	-10
-5 x 1	=	-5
-5 x 0	=	0
-5 x -1	=	5
-5 x -2	=	10

Based on our table, what rule can you come up with for multiplying a negative number by a negative number?

Rule:

A Negative Number multiplied by a Negative Number is a Positive Number

(-) x (-) = (+)

3 Example

Students type their answers here

-6 x -9

4 Example

Students type their answers here

-7 x -4

Dividing Integers

We can use the same rules we came up with for multiplying integers to divide integers!

So...

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

5

Example

Students type their answers here

$-25 \div 5$

6 Example

Students type their answers here

$-25 \div -5$

Recap:

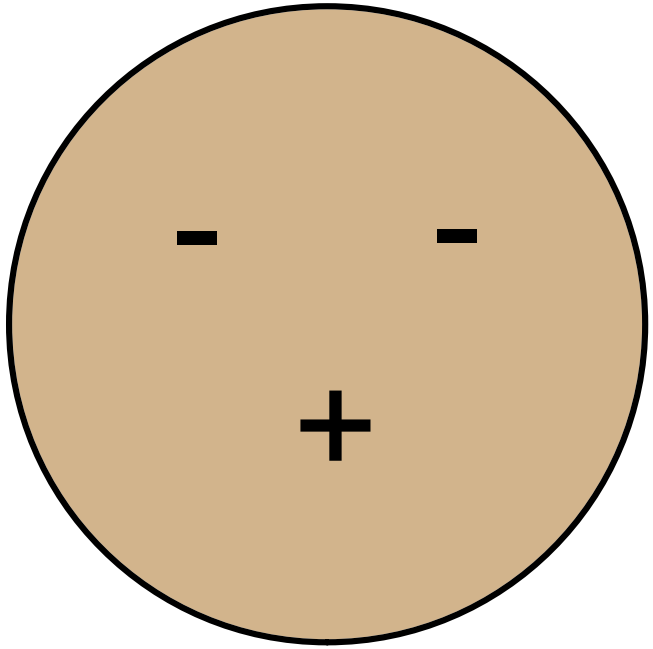
(+) x (+) = (+)	(+) ÷ (+) = (+)
(-) x (-) = (+)	(-) ÷ (-) = (+)
(+) x (-) = (-)	(+) ÷ (-) = (-)
(-) x (+) = (-)	(-) ÷ (+) = (-)

Integers multiplied/divided by 0

Any integer multiplied by 0 is 0.

Any integer divided by 0 is undefined.

Integer Man



1. $9 \times 10 \times 6$

2. $-6 \times -10 \times -8$

3. $7 \times 9 \times 7$

4. $6 \times 6 \times -2$

5. $-5 \times -4 \times -10$

6. $9 \times 9 \times -5$

7. $8 \times 3 \times 8$

8. $7 \times 5 \times -5$

9. $65 \div -13$

10. $12 \div 4$

11. $-168 \div -12$

12. $-8 \div 2$

13. $\dfrac{-105}{7}$

14. $\dfrac{-4}{-1}$

1. 4 + 8	**11.** 8 - (-1)	**21.** 5 • (-7)	**31.** -45 ÷ 9
2. -10 + 7	**12.** -5 - 2	**22.** -4 • 3	**32.** 15 ÷ (-3)
3. -2 + (-2)	**13.** -10 - (-3)	**23.** -8 • (-2)	**33.** -56 ÷ 8
4. 18 + (-7)	**14.** -2 - (-1)	**24.** -9 • (-1)	**34.** -10 ÷ (-5)
5. -33 + (-8)	**15.** 4 - (-6)	**25.** 5 • (-6)	**35.** 28 ÷ (-7)
6. -10 + 107	**16.** -9 - (-5)	**26.** -10 • (-4)	**36.** -36 ÷ (-6)
7. -52 + 24	**17.** 29 - (-11)	**27.** 6 • (-8)	**37.** 81 ÷ 9
8. 18 + (-77)	**18.** 0 - (-6)	**28.** 0 • (-3)	**38.** -72 ÷ 9
9. -4 + (-1)	**19.** -20 - (-9)	**29.** 7 • (-9)	**39.** -121 ÷ (-11)
10. 3 + (-6)	**20.** -101 – 38	**30.** -6 • (-11)	**40.** 54 ÷ (-6)

CHALLENGE

1. 20 ÷ (-5) + (-6)

2. -8 – 8 • 2

3. 4 • (-9) – (-6) + 12

4. -24 ÷ -6 • -2 – (-3) • 5