***Multiplying Integers***

Name: Div.: Date:

When you have a positive and a negative you move towards the negative.



Multiplying by a negative makes it go in the **opposite direction/flips the sign** of the value you are multiplying (you stumble back three steps [negative] twice, while facing the negatives)



When multiplying/dividing integers you do the math normally and just determine the sign based on this rule:

* Odd number of Negatives = Negative
	+ E.G. $\left(-2\right)\left(-3\right)\left(-2\right)=(-12)$ $\left(-2\right)\left(+3\right)\left(+2\right)=(-12)$
* Even Number of Negatives = Positive
	+ E.G. $\left(-2\right)\left(-3\right)\left(+2\right)=(+12)$ $\left(+2\right)\left(+3\right)\left(+2\right)=(+12)$

Diagram using a number line:

1. $\left(-3\right)\left(2\right)=(-6)$
2. $\left(-3\right)\left(-2\right)=\left(+6\right)$
3. $\left(-3\right)\left(-2\right)=\left(+6\right)$
4. $\left(-3\right)\left(-2\right)=\left(+6\right)$

Diagram using tiles:

1. $\left(-3\right)\left(+2\right)=(-6)$
2. $4\left(-2\right)=\left(-8\right)$
3. $\left(-3\right)\left(-2\right)=\left(+6\right)$
4. $\left(-2\right)\left(-4\right)=\left(+8\right)$

Identify the missing sign:

1. $\left(+6\right)\left( 7\right)=(+42)$
2. $\left(-6\right)\left( 7\right)=(+42)$
3. $\left( 2\right)\left( -3\right)=(-6)$
4. $\left( 2\right)\left( -3\right)=\left(+6\right)$

Identify the missing value:

1. $\left(-3\right)\left( \right)=\left(-9\right)$
2. $\left(+9\right)\left( \right)=\left(-27\right)$
3. $\left(-3\right)\left( \right)=\left(-15\right)$
4. $\left( \right)\left( -5 \right)=(+35)$
5. $\left( \right)\left( -6 \right)(-1)=(+12)$
6. $\left( +3\right)\left( \right)(-4)=(-36)$

Find the Product:

1. $-3\left(-4\right)\left(+5\right)=$
2. $-3\left(+2\right)\left(+3\right)=$
3. $3 x 7 x \left(-2\right)=$
4. $-2 x 3 x \left(-5\right)=$
5. $\left(-3\right)\left(-2\right)\left(-3\right)=$
6. $\left(-4\right)\left(+2\right)\left(+6\right)=$
7. $\left(-3\right)\left(-2\right)\left(+7\right)=$
8. $\left(-2\right)\left(-2\right)\left(-4\right)\left(-1\right)=$
9. $\left(-3\right)\left(-2\right)\left(+3\right)\left(-2\right)=$
10. The temperature in Quebec City was 3oC at midnight. The temperature dropped an average of 2oC/hr until 05:00.
	1. What was the total temperature change?
	2. What was the temperature at 05:00?
11. Copy and complete the following statements:
12. The product of three negative integers is always…
13. The product of two negative integers is always…
14. The product of two positives and one negative integer is always…
15. Decide whether each statement is always true, sometimes true, or never true. Explain.
16. The product of a non-zero integer and its opposite is the same as the square of that integer.
17. Multiplying a non-zero integer by itself gives a larger integer