

## MULTIPLYING AND DIVIDING INTEGERS

Cameron and Dakota are playing a game in which they choose two cards and multiply the numbers. The person with the largest product wins the round. Which cards should they choose in order to win the round?



12

-16

8

-6

Complete the multiplication table at the right and then answer the questions.

a. What patterns did you observe?

•	2	1	0	-1	-2
2					
1					
0					
-1					
-2					

b. What hypothesis can you make about multiplying two negative numbers?

### MULTIPLYING AND DIVIDING INTEGERS

- Multiply or divide the two numbers.
- If the signs are the same, then the answer is \_\_\_\_\_.
  - positive • positive = positive      Ex:  $8 \cdot 3 = 24$
  - negative • negative = positive      Ex:  $-8 \cdot (-3) = 24$
- If the signs are different, then the answer is \_\_\_\_\_.
  - positive • negative = negative      Ex:  $8 \cdot (-3) = -24$
  - negative • positive = negative      Ex:  $-8 \cdot 3 = -24$

1. One January day, the low temperature in Fargo, ND was  $-8^{\circ}$ . The temperature rose  $4^{\circ}\text{F}$  every hour for the next six hours. After six hours, what the was the temperature?

I KNOW:

I NEED TO KNOW:

PLAN AND WORK:

SOLUTION:

Apply your understanding of multiplying and dividing integers to solve the questions below.

2. Quinn and Leo are playing a game where they are given two numbers and must multiply them together to find the third number in the row. Then, they will multiply the 2<sup>nd</sup> and 3<sup>rd</sup> number in the row to find the 4<sup>th</sup> number. They continue until the row is completed. If the person with the largest value in the 5<sup>th</sup> column wins, who is the winner of each round?

ROUND 1	QUINN	4	-4			
	LEO	-2	-3			
ROUND 2	QUINN	-4	1			
	LEO	-5	-2			

3.  $78 \div (-6) =$

4.  $-42 \div (-7) =$

5.  $\frac{-21}{3} =$

6.  $\frac{-72}{-8} =$

7.  $-98 \div 7 =$

8.  $\frac{-85}{17} =$

9. Theo is playing a game where he must divide 60 by a number and get a quotient less than 10. Shade in any square that Theo could choose.

10	-12	3
-1	2	-5
6	4	-6

10. Three friends are playing a card game. The person who draws a card with an expression equivalent to  $(-2)(40)$  wins. Which player won?

AMARI

$-8(-10)$

JUNE

$-5(-2)(8)$

RILEY

$-4(-4)(-5)$

Summarize today's lesson: