1.4 Multiplying Integers
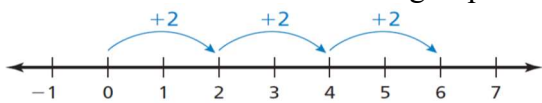
EQ: Is the product of two integers positive, negative, or zero?

ACTIVITY 1: Multiplying Integers with the **SAME SIGN**
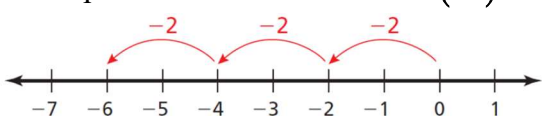
Use repeated addition to find **3 • 2.** Recall that multiplication is repeated addition. 3 • 2 means to add 3 groups of 2.

$$3 \cdot 2 = \boxed{2} + \boxed{2} + \boxed{2}$$

$$= \boxed{6}.$$

ACTIVITY 2: Multiplying Integers with the **DIFFERENT SIGNS**

Use repeated addition to find **3 • (−2).**

$$3 \cdot (-2) = \boxed{-2} + \boxed{-2} + \boxed{-2}$$

$$= \boxed{-6}.$$

ACTIVITY 3: Multiplying Integers with the **DIFFERENT SIGNS**

Fill in three to four products, describe the pattern of the products in the table, then complete the table to find the product **−3 • 2.**

The PRODUCTS in this table decrease by 2 in each row.

−3 • 2 = ___-6___

2	•	2 =	4
1	•	2 =	2
0	•	2 =	0
−1	•	2 =	-2
−2	•	2 =	-4
−3	•	2 =	-6

ACTIVITY 4: Multiplying Integers with the **SAME SIGN**

Fill in three to four products, describe the pattern of the products in the table, then complete the table to find the product **−3 • (−2).**

The PRODUCTS in this table increase by 3 in each row.

−3 • (−2) = ___6___

−3	•	3 =	-9
−3	•	2 =	-6
−3	•	1 =	-3
−3	•	0 =	0
−3	•	−1 =	3
−3	•	−2 =	6

INDUCTIVE REASONING… Fill in the table below

Exercise	Type of Product	Product	Product: Positive or Negative
3 • 2	Same Signs	6	POSITIVE
3 • (−2)	Different Signs	-6	NEGATIVE
−3 • 2	Different Signs	-6	NEGATIVE
−3 • (−2)	Same Signs	6	POSITIVE
6 • 3	Same Signs	18	POSITIVE
2 • (−5)	Different Signs	-10	NEGATIVE
−6 • 5	Different Signs	-30	NEGATIVE
−5 • (−3)	Same Signs	15	POSITIVE

Rules for MULTIPLYING INTEGERS:

-When multiplying integers with the **SAME SIGN**, the **PRODUCT** is **POSITIVE.**

EX: Find -5 · (-6)= 30

The signs are the SAME, so the PRODUCT is POSITIVE.

-When multiplying integers with **DIFFERENT SIGNS**, the **PRODUCT** is **NEGATIVE.**

EX: Find 3(-4)= -12

The signs are DIFFERENT, so the PRODUCT is NEGATIVE.

🔴 **On Your Own**

Multiply.

1. 5 · 5

2. 4(11)

3. −1(−9)

4. −7 • (−8)

5. 12 • (−2)

6. 4(−6)

7. −10(−6)(0)

8. −7 • (−5) • (−4)

1.4 Multiplying Integers

EQ: _____

_____

ACTIVITY 1: Multiplying Integers with the **SAME SIGN**

Use repeated addition to find **3 • 2.** Recall that multiplication is repeated addition. 3 • 2 means to add 3 groups of 2.
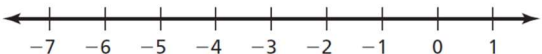
$$3 \cdot 2 = \boxed{} + \boxed{} + \boxed{}$$

$$= \boxed{}.$$
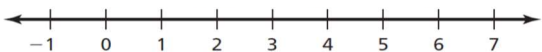
ACTIVITY 2: Multiplying Integers with the **DIFFERENT SIGNS**

Use repeated addition to find **3 • (−2).**

$$3 \cdot (-2) = \boxed{} + \boxed{} + \boxed{}$$

$$= \boxed{}.$$

ACTIVITY 3: Multiplying Integers with the **DIFFERENT SIGNS**

Fill in three to four products, describe the pattern of the products in the table, then complete the table to find the product **−3 • 2.**

2	• 2 =	
1	• 2 =	
0	• 2 =	
−1	• 2 =	
−2	• 2 =	
−3	• 2 =	

−3 • 2 = _____

ACTIVITY 4: Multiplying Integers with the **SAME SIGN**

Fill in three to four products, describe the pattern of the products in the table, then complete the table to find the product **−3 • (−2).**

−3	• 3 =	
−3	• 2 =	
−3	• 1 =	
−3	• 0 =	
−3	• −1 =	
−3	• −2 =	

−3 • (−2) = _____

INDUCTIVE REASONING... Fill in the table below

Exercise	Type of Product	Product	Product: Positive or Negative
3 • 2			
3 • (−2)			
−3 • 2			
−3 • (−2)			
6 • 3			
2 • (−5)			
−6 • 5			
−5 • (−3)			

Rules for MULTIPLYING INTEGERS:

-When multiplying integers with the _____ _____ , the **PRODUCT** is _____.

EX: Find -5 · (-6)=

-When multiplying integers with _____ _____ , the **PRODUCT** is _____.

EX: Find 3(-4)=

🔴 **On Your Own**

Multiply.

1. 5 • 5   2. 4(11)

3. −1(−9)   4. −7 • (−8)

5. 12 • (−2)   6. 4(−6)

7. −10(−6)(0)   8. −7 • (−5) • (−4)