

# 8.2 Multiplying Integers

MathLinks 8, pages 293–299

## Key Ideas Review

Choose from the terms below to complete #1 to #3. Then, complete the examples.

negative

number line

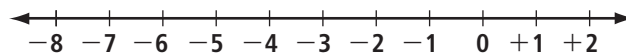
positive

same

sign

1. You can use a \_\_\_\_\_ to model multiplication of a \_\_\_\_\_ integer by another integer.

For example,  $(+4) \times (-1) = -4$  can be modelled as



2. a) You can multiply two integers by multiplying the numerals and applying the \_\_\_\_\_ rules below.

b) If both integers have the same sign, then the product is \_\_\_\_\_.

For example,  $(-7) \times (-4) = \underline{\hspace{2cm}}$  and  $(+7) \times (+4) = \underline{\hspace{2cm}}$

c) If the integers have different signs, then the product is \_\_\_\_\_.

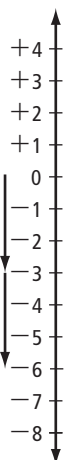
For example,  $(-7) \times (+4) = \underline{\hspace{2cm}}$  and  $(+7) \times (-4) = \underline{\hspace{2cm}}$

3. It does not matter in what order you multiply 2 integers. You will get the \_\_\_\_\_ answer. For example,  $(+4) \times (-6) = -24$  or  $(-6) \times (+4) = \underline{\hspace{2cm}}$

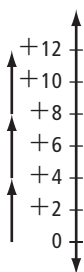
## Practise and Apply

4. Write the multiplication statement shown on each diagram.

a)



b)



5. Draw a number line to determine each product.

a)  $(+2) \times (-5)$

b)  $(+4) \times (+4)$

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**Date:** \_\_\_\_\_

6. Determine each product using the sign rules.

a)  $(+7) \times (+6)$

b)  $(+8) \times (-4)$

c)  $(-5) \times (+9)$

d)  $(-10) \times (-11)$

7. Estimate and then calculate.

a)  $(+18) \times (+9)$

b)  $(+32) \times (-15)$

c)  $(-59) \times (+12)$

d)  $(-98) \times (-18)$

8. Joshua spilled juice on his assignment. Fill in the integers that got smudged.



a)  $(+10) \times (-4) = \underline{\hspace{2cm}}$

b)  $(-4) \times \underline{\hspace{2cm}} = -20$

c)  $\underline{\hspace{2cm}} \times (-8) = +16$

d)  $\underline{\hspace{2cm}} \times (-6) = -54$

e)  $(+5) \times \underline{\hspace{2cm}} = +35$

9. An Internet provider offers a discount of \$2.50 per month if a customer pays by automatic withdrawal.

- a) How much will a customer save over two years?

- b) How much will the Internet provider lose annually for each customer who makes this choice? Express this as an integer.