

Name: _____

Date: _____

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| Learning Goal 1.2 | I can multiply and divide integers. |
|--------------------------|-------------------------------------|

Integer 1 ÷ Integer 2

the 'answer' or finishing point

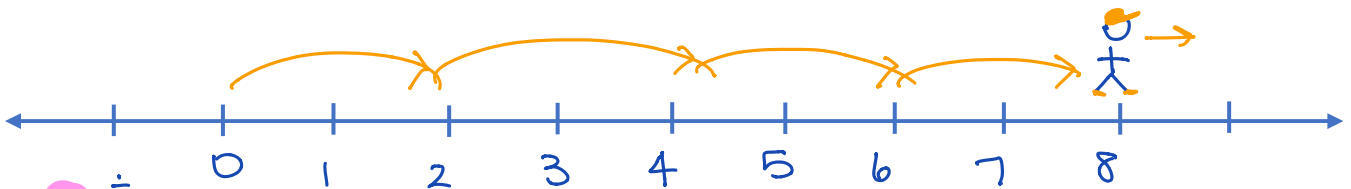
↪ +/_ direction we're facing
how many jumps

Quotient: size and direction of jump

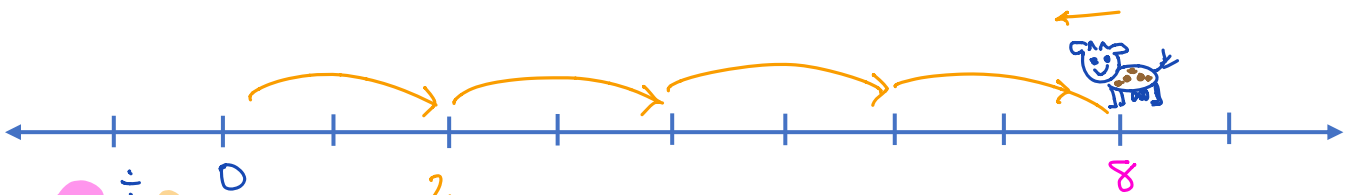
Always start at zero on the number line.

Example Find the following *quotient* by modelling the equation.

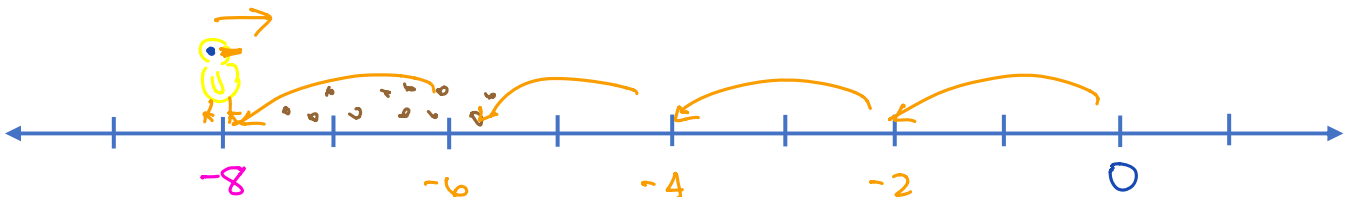
a. $(+8) \div (+4) = 2$



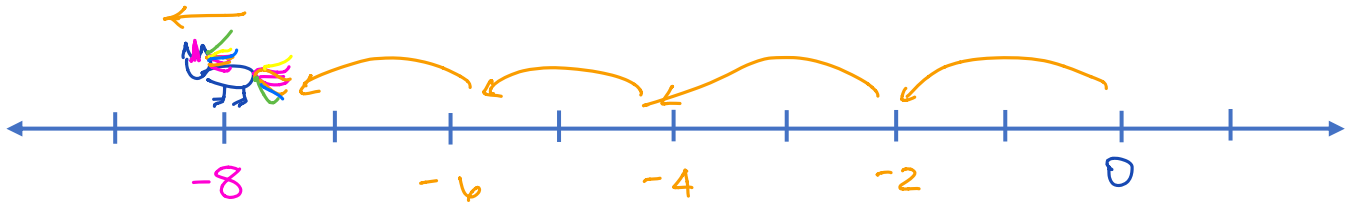
b. $(+8) \div (-4) = -2$



c. $(-8) \div (+4) = -2$



d. $(-8) \div (-4) = 2$



Sign Rule

- When the integers have the same sign, the quotient is positive
- When the integers have different signs, the quotient is negative

Last time (for now), models are *time consuming*
inconsistent *necessary.*
limited

Example Find the following **products** without modelling.

a. $(-8) \div (-2) = 4$

b. $(-12) \div 4 = -3$

c. $(-63) \div 7 = -9$

d. $24 \div (-4) \div (-6) = 1$

Example Daria and her ^{four} friends went out for lunch. They agreed to split the cost equally. The total bill came to \$85, which Daria put on her credit card. How much did each of her friends owe Daria?

$$85 \div 5 = 17$$

Each friend owes Daria \$17.