○ = -

● = +

Warm Up Grade 8

1) Use rules to find the quotient (-18) ÷ (-9) then write 2 multiplication statements using the statement. $= +2$

$(+2) \times (-9) = (-18)$

$(-9) \times (+2) = (-18)$

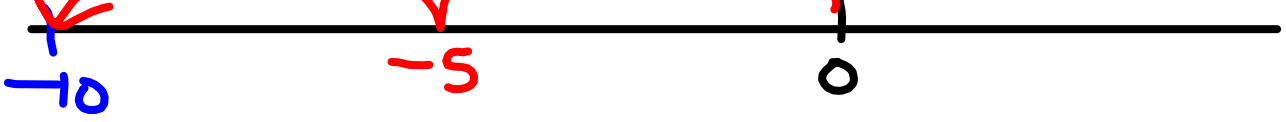
2) Use number line to model to find the quotient of

(-10) ÷ (+2)

arrow

start

$= (-5)$



3) Find the product using the distributive property box Method

(-32) x (+51) $= -1632$

show all work

30 2

50 | 1500 | 100

1 | 30 | 2

1500

100

30

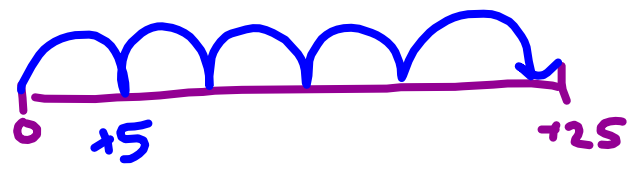
2

1632

pg 80

3a) $(+25) \div (+5) = +5$

$(+5) \times (+5) = +25$



b) $(+24) \div (-2) = -12$

$(-2) \times (-12) = +24$

or $(-12) \times (-2) = +24$

c) $(-14) \div (-7) = +2$

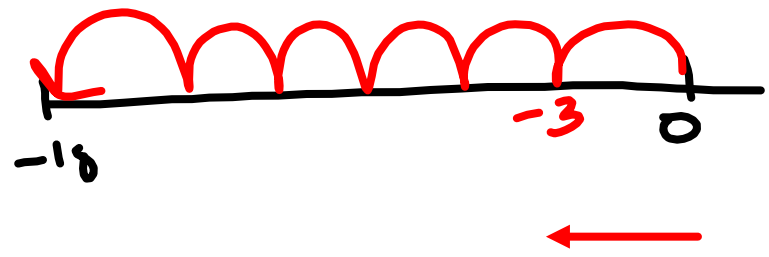
$(-7) \times (+2) = -14$

or $(+2) \times (-7) = -14$

d) $(-18) \div (+6) = -3$

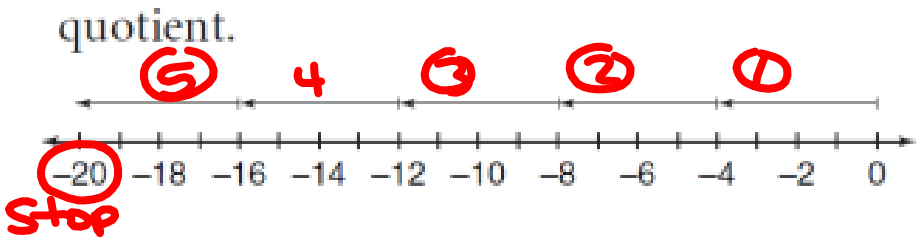
$(+6) \times (-3) = -18$

or $(-3) \times (+6) = -18$



4. Which integer division does each number line represent? Find each quotient.

a)

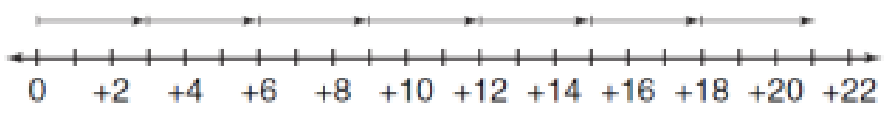


$(-20) \div (+5) = (-4)$

or

$(-20) \div (-4) = +5$

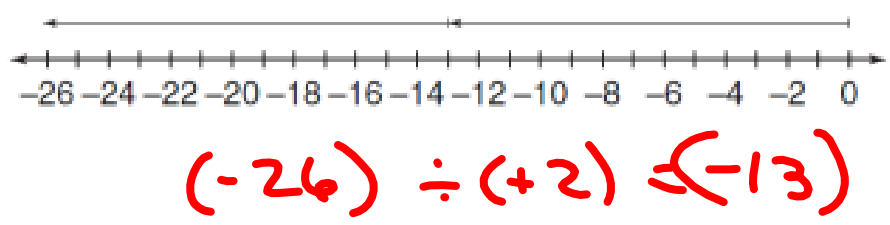
b)



$(+21) \div (+3) = +7$

$(+21) \div (+7) = +3$

c)



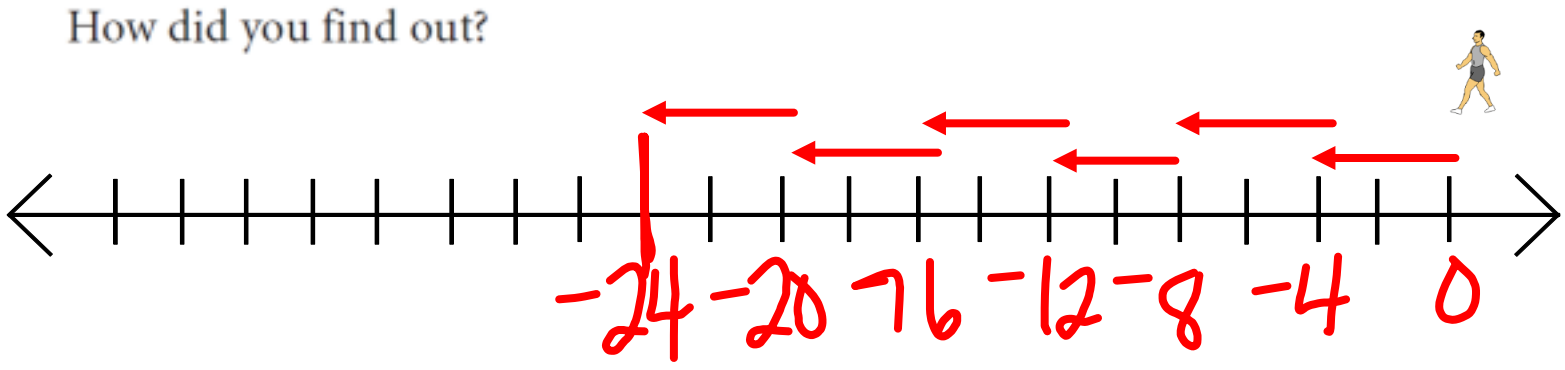
$(-26) \div (+2) = (-13)$

$(-26) \div (-13) = +2$

5. Enrico walked a number line to model a division. He started at 0. Enrico took steps forward of size 4. He ended up at –24. Which division did Enrico model? How did you find out?

(-24) ÷ (?) = (-4)

(-24) ÷ (-4) = (+6)

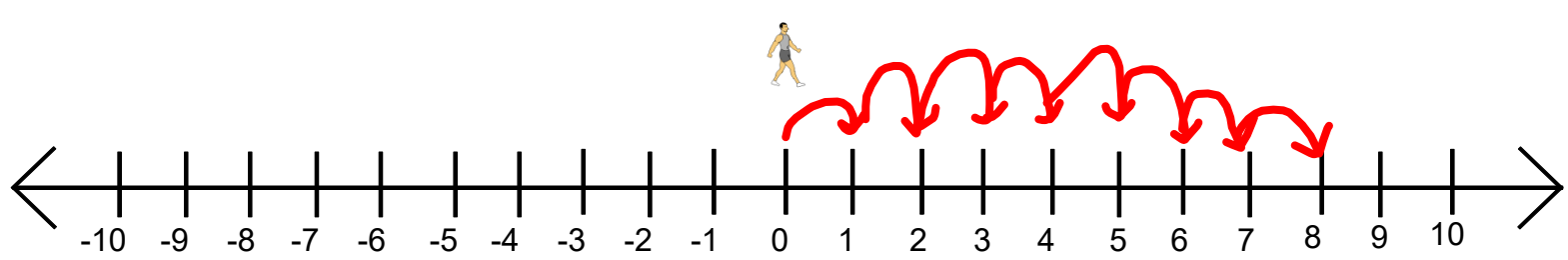


forward 4 is +4 facing destination

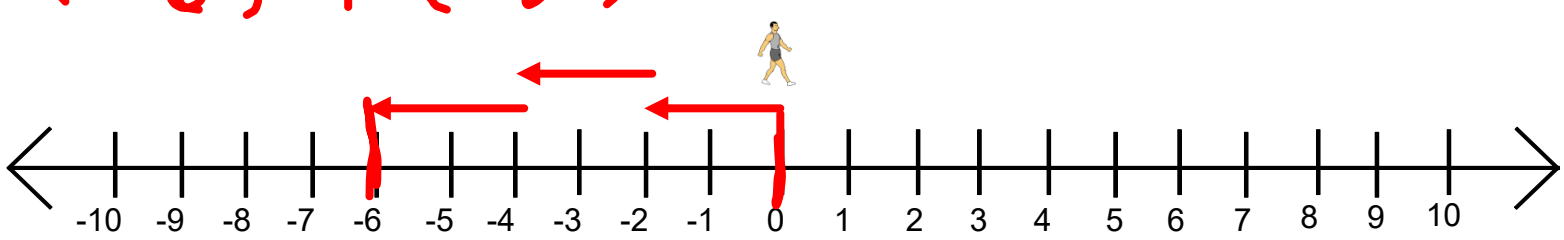
(-24) ÷ (+4) = (-6)

I found out by drawing the number line.

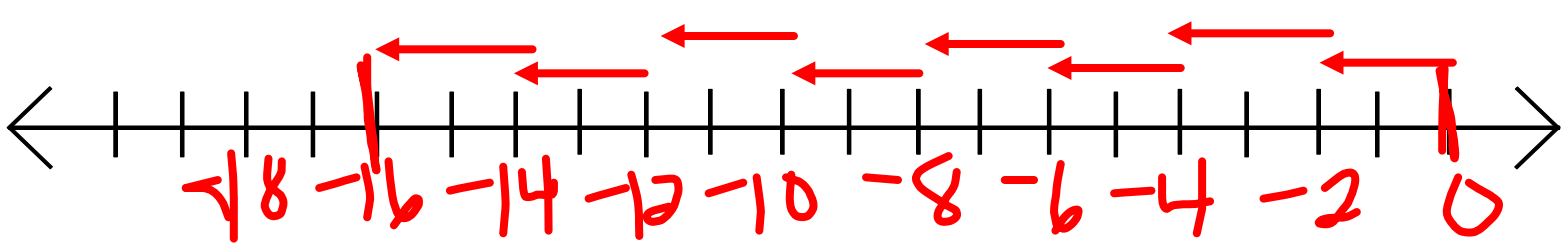
a) $(+8) \div (+1) = +8$



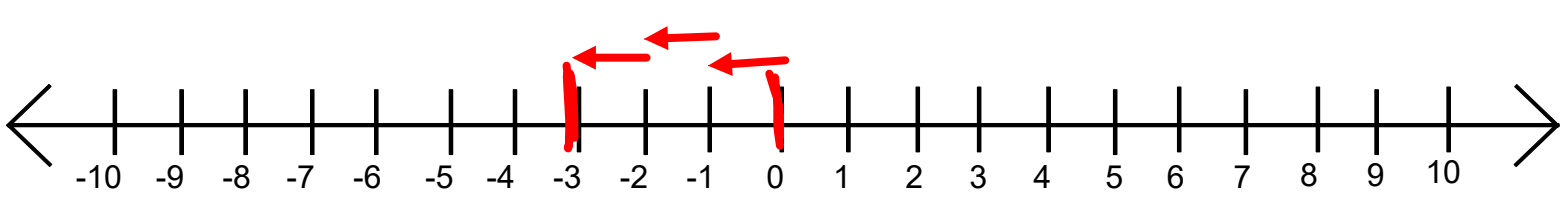
b) $(-6) \div (-2) = +3$



c) $(-16) \div (+8) = -2$



d) $(-3) \div (-1) = +3$



e) $(+15) \div (-3) = -5$

f) $(-20) \div (+2) = -10$

Write a division statement for the following and answer

Ex) 10 yellow grouped in sets of 2 --> (+10) ÷ (+2) = (+5)

7. a) How many sets?

i) 12 yellow tiles grouped in sets of 6 (+12) ÷ (+6) = +2

ii) 15 red tiles grouped in sets of 3 (-15) ÷ (+3) = (-5)

b) How many in each set?

i) 8 yellow tiles shared among 2 sets (+8) ÷ (+2) = +4

iii) 21 red tiles shared among 7 sets (-21) ÷ (+7) = (-3)

8. Use Rules to find the Quotient (No Modeling)

a) $(+18) \div (+6)$ (+3)

b) $(-18) \div (+9)$ (-2)

c) $(-16) \div (-4)$ (+4)

d) $(+21) \div (-7)$ (-3)

e) $(+15) \div (-5)$ (-3)

f) $(-16) \div (-8)$ (+3)

9.Use Rules to find the Quotient (No Modeling)

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

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

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

d) $(-8) \div (+4)$ (-2)

Class / Homework

Page 80-81 Finish 6,7,8, from last day for those that did not do HW

#9, Using rules THE WS on next page

Worksheet next pages

$(-) \div (-) = +$

$(+) \div (-) = -$

$(+) \div (+) = +$

*on multiplication rules & Box Method

*Division Rules

if you need more pg 166 # 8 to #15

1) a) Multiply (-93) (-82)

b) Divide (-150) ÷ (+15)

2) Devon withdrew $6 each week for a total withdraw of $48. Use integers to find the number of weeks the that he did this for.

10.Use Rules to find the Quotient (No Modeling)

a) $(+24) \div (+8)$ b) $(-20) \div (-5)$ c) $(+28) \div (-7)$ d) $(-25) \div (+5)$

e) $(-14) \div (+2)$ f) $(+18) \div (-9)$

Write a divsion equation for each word problem

12. The temperature fell 4°C each hour for a total change of –20°C. Use integers to find the number of hours the change in temperature took.

17 Evaluate.

a) $(+9) \times (+10)$ **b)** $(+6) \times (-11)$ **c)** $(+96) \div (-16)$

d) $(+39) \div (+3)$ **e)** $(-8) \times (+6)$ **f)** $(-36) \div (+9)$

g) $(-44) \div (-4)$ **h)** $(-5) \times (-1)$

18) Find the missing term

a) ____ ÷ (-6) = (-10)

b) (+44) ÷ _____ = (-4)

c) (+24) ÷ ____ = (-6)

c) (+48) ÷ ____ = (+4)

d) (+14) x (-2) =____

e) (-15) x ____ = (+105)

f) (___) ÷ (-10) = (-5)

g) (-18) x (-4) =____

h) (-54) ÷ _____ = (+9)

i) (__) ÷ (-12) = (+96)

Write a divsion equation for each word problem

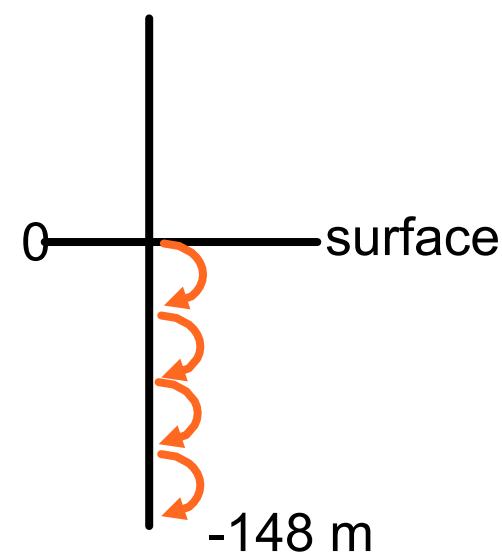
11. The temperature rose 3°C each hour for a total change of +12°C. Use integers to find the number of hours the change in temperature took.

(+3) x (?) = (+)

(+12) ÷ (+3) = (+4)

It took 4 hours

13. A submarine was at the surface of the ocean. It made 4 identical plunges in a row. Its final depth was 148 m below sea level. What was the depth of each plunge?



(-148) ÷ (4 jumps down) = (-37)

Each jump is -37m or 37m down

Show your thinking

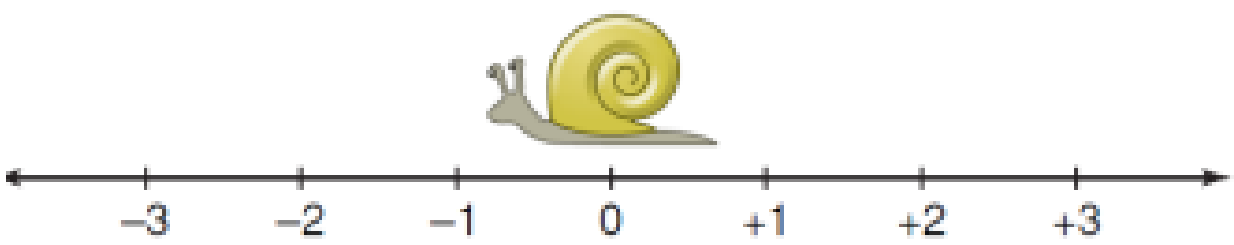
18. **Take It Further** Reena deposits $4 into her savings account each week. Today, Reena's account has a balance of $16.

a) How many weeks from now will Reena's account have a balance of $40?

b) What was the balance in Reena's account 2 weeks ago?

Explain how you can use integers to model each situation.

16. A snail travels along a number line marked in centimetres. A distance of 1 cm to the right is represented by +1. A distance of 1 cm to the left is represented by –1. The snail moves 6 cm to the left each minute. Jump size is 6 cm



Draw a model to represent each answer. Write a division equation for each model.

a) The snail is at 0 now. After how many minutes will the snail be at –36 on the number line?

Snail is now at zero,

b) When was the snail at +18 on the number line?