

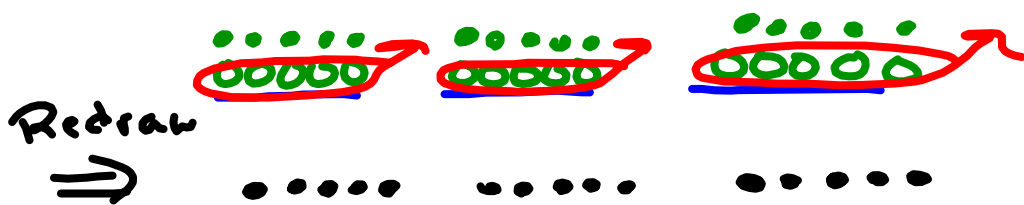
Warm Up Grade 8

Sept. 9



1) Use tiles to show the following products:

a) $(-3) \times (-5)$



$(-3) \times (-5) = (+15)$

2) Find the product of each using only the rules

a) $(-7) \times (+3) = (-21)$ *di: - x + = -*
b) $(+4) \times (-12) = (-48)$ *di: + x - = -*
c) $(+9) \times (+8) = (+72)$ *Same*
d) $(-6) \times (-2) = (+12)$ *Same*

3) Multiply using the distributive property (Box method)

a) $(-18) \times (+24) = (-432)$ *di: - x + = -*
b) $(-25) \times (-70) = (+1750)$ *Same*

	<u>20</u>	<u>4</u>
<u>10</u>	$10 \times 20 = 200$	$10 \times 4 = 40$
<u>8</u>	$8 \times 20 = 160$	$8 \times 4 = 32$

$\begin{array}{r} 200 \\ 160 \\ 40 \\ + 32 \\ \hline 432 \end{array}$

	<u>30</u>	<u>5</u>
<u>70</u>	$70 \times 30 = 2100$	$70 \times 5 = 350$

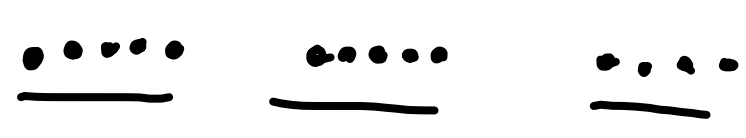
$\begin{array}{r} 2100 \\ + 350 \\ \hline 2450 \end{array}$

Warm Up Grade 8



1) Use tiles to show the following products:

a) $(-3) \times (-5) = (+15)$

take away 3 groups of (-5) $\Rightarrow$  $\Rightarrow$ 

① answer ① zero pairs ① model answer

2) Find the product of each using only the rules

a) $(-7) \times (+3) = (-21)$ b) $(+4) \times (-12) = (-48)$ c) $(+9) \times (+8) = (+72)$ d) $(-6) \times (-2) = (+12)$

diff diff Same same

3) Multiply using the distributive property (Box method)

a) $(-18) \times (+24) = (-432)$ b) $(-5) \times (-70) = (+350)$

2sf Box 1sf 0.5 answer 0.5 p+

10 8 30 5

20×10 200	20×8 160
4×10 40	4×8 32

20
4

200
160
40
32
+
432

0.5 show adding

70×30 2100	70×5 350
------------------------	----------------------

70

0.5 p+

2100
+ 350
2450

Class/Homework

Page 73

Homework Solutions

#3 (a,b,c,d) → Rules

#4 (a,b,c,d,e,f,g,h,i,j)

#6 (a,c,e,g) USE distributive Property

#7 (b,d,f,h) Use The Distributive Property

#8 (a,b,g,h)

BOX Method

BOX Method

} show work

/24

$$3a) (-6) \times (+2) = (-12)$$

$$b) (+6) \times (+4) = (+24)$$

$$c) (+4) \times (-2) = (-8)$$

$$d) (-7) \times (-3) = (+21)$$

$$4a) (+8) \times (-3) = (-24)$$

$$b) (-5) \times (-4) = (+20)$$

$$c) (-3) \times (+9) = (-27)$$

$$d) (+7) \times (-6) = (-42)$$

$$e) (+10) \times (-3) = (-30)$$

$$f) (-7) \times (-6) = (+42)$$

$$g) (0) \times (-8) = 0$$

$$h) (+10) \times (-1) = (-10)$$

$$i) (-7) \times (-8) = (+56)$$

$$j) (+9) \times (-9) = (-81)$$

#3 (a,b,c,d)

#4 (a,b,c,d,e,f,g,h,i,j)

#6 (a,c,e,g) USE distributive Property

#7 (b,d,f,h) Use The Distributive Property

#8 (a,b,g,h)

Homework Solutions

$$\begin{aligned}
 *6a) & (+20) \times (+15) \\
 & (+20) \times [(+10) + (+5)] \\
 & \underbrace{(+20) \times (+10)}_{(+200)} + \underbrace{(+20) \times (+5)}_{(+100)} \\
 & = (+300) \leftarrow
 \end{aligned}$$

$$\begin{array}{|c|c|}
 \hline
 (+10) & (+5) \\
 \hline
 20 \times 10 & 20 \times 5 \\
 \hline
 200 & 100 \\
 \hline
 \end{array}$$

$$\begin{aligned}
 *6c) & (+50) \times (-32) \\
 & = (+50) \times [(-30) + (-2)] \\
 & = \underbrace{(+50) \times (-30)}_{(-1500)} + \underbrace{(+50) \times (-2)}_{(-100)} \\
 & = (-1500) + (-100) \\
 & = (-1600)
 \end{aligned}$$

$$\begin{array}{|c|c|}
 \hline
 -30 & -2 \\
 \hline
 & \\
 \hline
 1500 & \\
 + & 100 \\
 \hline
 1600 & \\
 \hline
 \end{array}$$

$$\begin{aligned}
 6e) & (-60) \times (+13) \\
 & = (-60) \times [(+10) + (+3)] \\
 & = \underbrace{(-60) \times (+10)}_{(-600)} + \underbrace{(-60) \times (+3)}_{(-180)} \\
 & = (-600) + (-180) \\
 & = (-780)
 \end{aligned}$$

$$\begin{array}{|c|c|}
 \hline
 10 & 3 \\
 \hline
 60 \times 10 & 3 \times 60 \\
 \hline
 600 & 180 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 600 \\
 + 180 \\
 \hline
 780
 \end{array}$$

$$\begin{aligned}
 6g) & (+70) \times (+47) \\
 & = (+70) \times [(+40) + (+7)] \\
 & = \underbrace{(+70) \times (+40)}_{(+2800)} + \underbrace{(+70) \times (+7)}_{(+490)} \\
 & = (+2800) + (+490) \\
 & = (+3290)
 \end{aligned}$$

Homework Solutions

$$*7b) (+25) \times (-12)$$

$$(25) \times (12)$$

$$= (20 \times 10) + (5 \times 10) + (2 \times 20) + (2 \times 5)$$

$$= 200 + 50 + 40 + 10$$

$$= 300$$

$$(-25) \times (-12) = (-300)$$

	20	5
10	20×10 200	10×5 50
2	2×20 40	2×5 10

$$\begin{array}{r} 200 \\ 50 \\ 40 \\ 10 \\ \hline 300 \end{array}$$

$$*d) (-37) \times (+18)$$

$$+ \text{think} \\ (37) \times (18)$$

$$= (30 \times 10) + (10 \times 7) + (8 \times 30) + (7 \times 8)$$

$$= (300) + (70) + (240) + (56)$$

$$= 666$$

$$(-37) \times (+18) = (-666)$$

	30	7
10	30×10 300	10×7 70
8	8×30 240	8×7 56

$$\begin{array}{r} 300 \\ 240 \\ 70 \\ +56 \\ \hline 666 \end{array}$$

$$f) (+84) \times (-36)$$

$$+ \text{think} \\ (84) \times (36)$$

$$= (80 \times 30) + (80 \times 6) + (4 \times 30) + (6 \times 4)$$

$$= (2400) + (480) + (120) + (24)$$

$$= 3024$$

$$(+84) \times (-36) = (-3024)$$

	30	6
80	80×30 2400	80×6 480
4	4×30 120	4×6 24

$$\begin{array}{r} 2400 \\ 480 \\ 120 \\ +24 \\ \hline 3024 \end{array}$$

$$h) (+29) \times (+23)$$

$$= (20 \times 20) + (20 \times 9) + (20 \times 3) + (3 \times 9)$$

$$= (400) + (180) + (60) + (27)$$

$$= 667$$

$$(+29) \times (+23) = (+667)$$

	20	9
20		
3		

#3 (a,b,c,d)
#4 (a,b,c,d,e,f,g,h,i,j)
#6 (a,c,e,g) USE distributive Property
#7 (b,d,f,h) Use The Distributive Property
#8 (a,b,g,h)

Homework Solutions

a) $(+5) \times \underline{+4} = (+20)$ *sign same*

b) $\underline{-3} \times (-9) = (+27)$ *sign same*

g) $\underline{-30} \times (-6) = (+180)$ *sign same*

h) $\underline{-6} \times (+4) = (+24)$

Class/Homework

Page 73

#3 (a,b,c,d)

#4 (a,b,c,d,e,f,g,h,i,j)

#6 (a,c,e,g) ^{BOX Method} USE distributive Property

#7 (b,d,f,h) ^{BOX Method} USE The Distributive Property

#8 (a,b,g,h)

Rules

}

show work

/24

TODAY Page 73

- #4 (g, h, i, j)
- #6 (BDFH) USE distributive Property
- #7 (acegh) Use The Distributive Property
- #8 (cdef)

Page 74 #10,
THEN WORKSHEET (Next Slide)

Worksheet Mult Integers

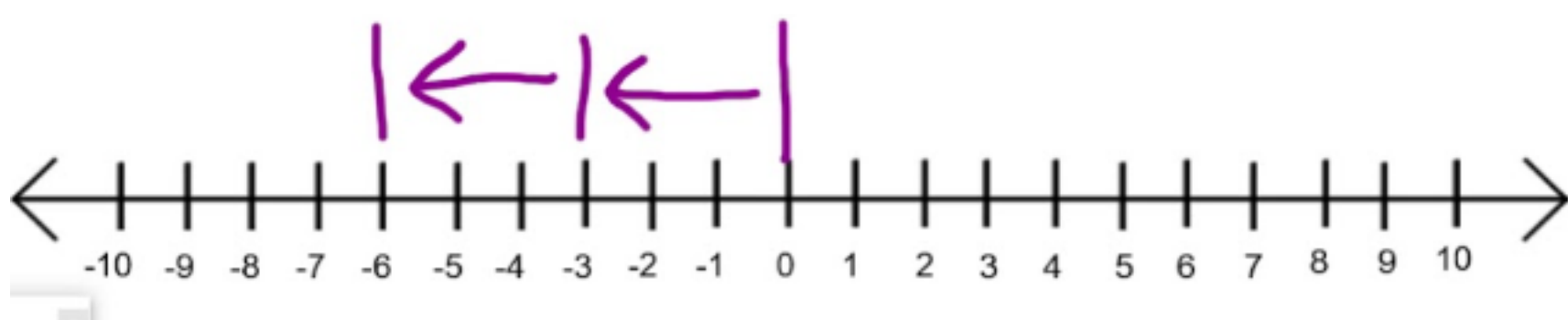
Quiz Tomorrow

1) Use Tile to multiply the following

a) $(-8) \times (+2)$

b) $(+7) \times (-4)$

2) What multiplication fact could be written for the following number line.



3) Find the product to each.

a) $(-15) \times (+2)$

b) $(-12) \times (-9)$

c) $(+11) \times (+10)$

d) $(-4) \times (-3)$

e) $(+7) \times (+7)$

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

g) $(-8) \times (+8)$

h) $(-6) \times (-3)$

4) Use the distributive Property for each

a) $(-14) \times (+62)$

b) $(+19) \times (-41)$

c) $(-15) \times (-17)$

d) $(+39) \times (+24)$