



○ = -

Warm Up Grade 8

● = +

Sept. 151) Use tile to model the product of  $(-6) \times (-2)$ 
 $\Rightarrow$ 
 $\Rightarrow$  
Remove 6 groups of  $-2$ 
 $\Rightarrow$  Redraw answer 
 $\Rightarrow (+12)$ 

2) Find the product using the distributive property (Box Method)

a)  $(-27) \times (+45) = (-1215)$   
 diff

b)  $(-26) \times (-34) = (+884)$   
 Same sign

|    |                      |                     |
|----|----------------------|---------------------|
|    | 20                   | 7                   |
| 40 | $20 \times 40 = 800$ | $7 \times 40 = 280$ |
| 5  | $5 \times 20 = 100$  | $5 \times 7 = 35$   |

$$\begin{array}{r} 800 \\ 280 \\ 100 \\ + 35 \\ \hline 1215 \end{array}$$

|    |                      |                     |
|----|----------------------|---------------------|
|    | 20                   | 6                   |
| 30 | $20 \times 30 = 600$ | $30 \times 6 = 180$ |
| 4  | $4 \times 20 = 80$   | $4 \times 6 = 24$   |

$$\begin{array}{r} 600 \\ 180 \\ 80 \\ + 24 \\ \hline 884 \end{array}$$



○ = -

● = +

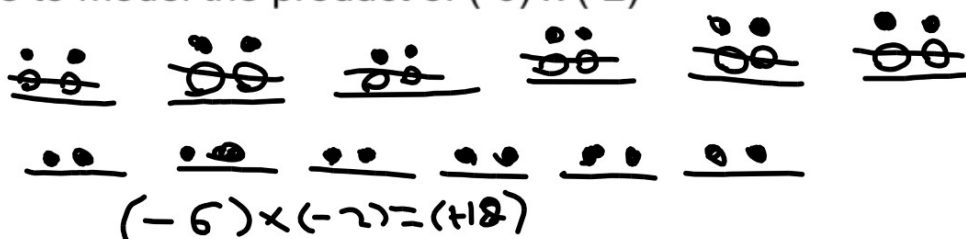
Warm Up Grade 8

Quiz Time

after warm up



1) Use tile to model the product of  $(-6) \times (-2)$



2) Find the product using the distributive property **Box Method**

a)  $(-27) \times (+45) = (-1215)$

|    |                      |                     |             |
|----|----------------------|---------------------|-------------|
|    | 40                   | 5                   |             |
| 20 | $40 \times 20 = 800$ | $20 \times 5 = 100$ | 800         |
| 7  | $40 \times 7 = 280$  | $7 \times 5 = 35$   | 1280        |
|    |                      |                     | <u>1215</u> |

b)  $(-26) \times (-34) = (+884)$

|    |                      |                    |            |
|----|----------------------|--------------------|------------|
|    | 30                   | 4                  |            |
| 20 | $20 \times 30 = 600$ | $20 \times 4 = 80$ | 600        |
| 6  | $6 \times 30 = 180$  | $6 \times 4 = 24$  | 880        |
|    |                      |                    | <u>884</u> |

## Worksheet Mult Integers

1) Use Tile to multiply the following

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

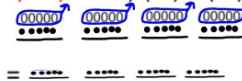
$= (+2) \times (-8) = (-16)$



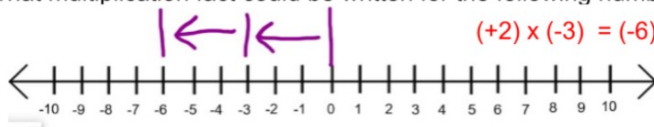
b)  $(+7) \times (-4) = (-28)$



c)  $(-4) \times (-5) =$



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



3) Find the product to each.

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

$= (-30)$

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

$= (+108)$

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

$= (+110)$

d)  $(-4)$

$= (-32)$

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

$= (+49)$

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

$= (-45)$

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

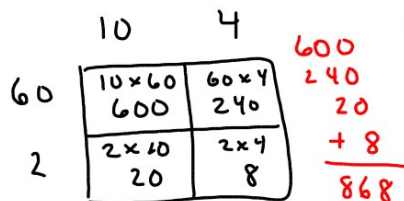
$= (-64)$

h)  $(+18)$

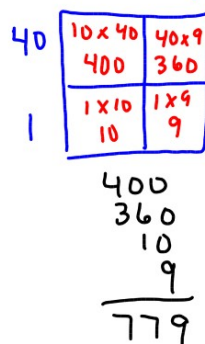
$= (+18)$

4) Use the distributive Property for each

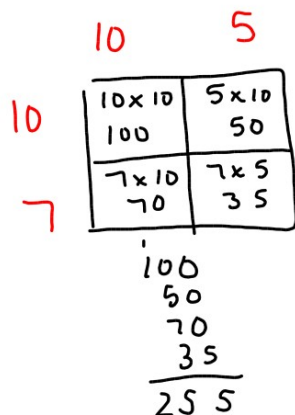
a)  $(-14) \times (+62) = (-868)$



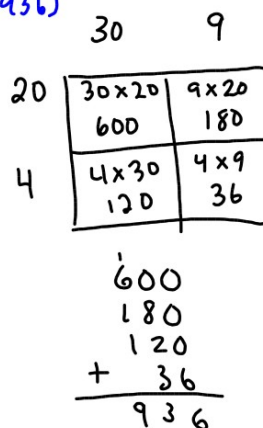
b)  $(+19) \times (-41) = (-779)$



c)  $(-15) \times (-17) = (+255)$



d)  $(+39) \times (+24) = (+936)$



Page 73

#4 (.g,h,i,j)

#6 (BDFH) USE distributive Property

#7 (acegh) Use The Distributive Property

#8 (cdef)

#10, #11)

## Homework Solutions

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

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

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

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

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

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

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

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

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

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

c)  $(-40) \times (+21)$

$$\begin{array}{r} 20 \quad 6 \\ 30 \times 20 = 600 \quad 6 \times 30 = 180 \\ \hline 600 \\ + 180 \\ \hline 780 \end{array}$$

40

|         |        |
|---------|--------|
| 20      | 1      |
| 40 x 20 | 40 x 1 |
| 800     | 40     |

$$\begin{array}{r} 800 \\ + 40 \\ \hline 840 \end{array}$$

$$(-90) \times (-52)$$

80

|                |               |
|----------------|---------------|
| 30             | 3             |
| $80 \times 30$ | $3 \times 30$ |
| 240            | 90            |

$$\begin{array}{r} 240 \\ + 90 \\ \hline 330 \end{array}$$

40 

|                |               |
|----------------|---------------|
| 50             | 2             |
| $50 \times 90$ | $2 \times 90$ |
| 450            | 180           |

$$\begin{array}{r} 450 \\ 180 \\ \hline 630 \end{array}$$

20

|              |            |
|--------------|------------|
| 20x10<br>200 | 20x2<br>40 |
| 5x10<br>50   | 2x5<br>10  |

5

200  
40  
50  
10  
300

|    |                       |                     |
|----|-----------------------|---------------------|
|    | 30                    | 4                   |
| 10 | $30 \times 10$<br>300 | $10 \times 4$<br>40 |
| 6  | $6 \times 30$<br>180  | $6 \times 4$<br>24  |

|            |
|------------|
| 300        |
| 180        |
| + 40       |
| <u>520</u> |

10 7

|                       |                     |
|-----------------------|---------------------|
| $10 \times 10$<br>100 | $10 \times 7$<br>70 |
| $3 \times 10$<br>30   | $3 \times 7$<br>21  |

3

100  
70  
30  
21  

---

221

50      1

20      

|                        |                     |
|------------------------|---------------------|
| $20 \times 50$<br>1000 | $1 \times 20$<br>20 |
| $5 \times 50$<br>250   | $5 \times 1$<br>5   |

5

1000  
250  
20  
5  

---

20      9

|                       |                      |
|-----------------------|----------------------|
| $20 \times 20$<br>400 | $20 \times 9$<br>180 |
| $3 \times 20$<br>60   | $3 \times 9$<br>27   |

400  
180  
60  
27

---

667

8 a c d f

$$c) (-9) \times (+6) = (-54) \quad \text{diff}$$

d)  $\boxed{-6} \times (-3) = (+18)$  <sup>same</sup>

f)  $\boxed{-12} \times (-12) = (+144)$  <sup>same</sup>

## Homework Solutions

10) Gaston \$26 withdrew for 17 weeks

$$(-26) \times (+17)$$

|    |                       |                      |
|----|-----------------------|----------------------|
|    | 20                    | 6                    |
| 10 | $20 \times 10$<br>200 | $20 \times 6$<br>120 |
| 7  | $7 \times 20$<br>140  | $7 \times 6$<br>42   |

$$\begin{array}{r} 200 \\ 120 \\ 140 \\ 42 \\ \hline 502 \end{array}$$

Gaston withdrew  
\$502.

11) a) greatest product  $\Rightarrow$  largest (+) So  $(-)\times(-)$   
or  
 $(+)\times(+)$

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

$(-5) \times (-8) = +40$  greatest

$(-8) \times (-2) = +16$

$(+9) \times (+4) = +36$

b) least product  $\Rightarrow$  negative So  $(-)\times(+)$

$(-5) \times (+9) = -45$

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

$(-8) \times (+9) = -72$  least

$(-8) \times (+4) = -32$

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

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

## \* Add or Subtract Decimals

Stack #s

To add or subtract decimals, follow these steps:

- > Write down the numbers, one under the other, with the decimal points lined up.
- > Put in zeros so the numbers have the same length
- > Then add or subtract, using column addition, remembering to put the decimal point in the answer lined up.

Ex)  $2.679 + 1.5 = 4.179$

$$\begin{array}{r} 2.679 \\ + 1.500 \\ \hline 4.179 \end{array}$$

Ex)  $21.607 + 0.958 = 22.565$

$$\begin{array}{r} 21.607 \\ + 0.958 \\ \hline 22.565 \end{array}$$

Ex)  $17.2 - 6.37$

$$\begin{array}{r} 17.20 \\ - 6.37 \\ \hline 10.83 \end{array}$$

$$17.2 - 6.37 = 10.83$$

## Add or Subtract

↳ the decimal (•) lines up

a)  $37.18 + 0.29 = 37.47$

$$\begin{array}{r} 37.18 \\ + 0.29 \\ \hline 37.47 \end{array}$$

b)  $74.1 - 21.46 = 52.64$

$$\begin{array}{r} 74.10 \\ - 21.46 \\ \hline 52.64 \end{array}$$

c)  $21 + 4.2$

$$\begin{array}{r} 21. \\ + 4.2 \\ \hline \end{array}$$

d)  $31.7 - 5.06$