

1.2 Adding + Subtracting Rational Numbers in Decimal Form

September 14, 2018 11:16 AM

1.2 - Rational Numbers in Decimal Form...continued!

Name: _____ Block: _____

Evaluate.

98. $2 \times 5 = 10$ 99. $-2 \times 5 = -10$ 100. $2 \times (-5) = -10$ 101. $-2 \times (-5) = 10$ 102. $2(-7) = (2)(-7) = 2 \times -7 = -14$ ↙ multiply

What are the RULES for MULTIPLYING & DIVIDING integers?

Rule	Example
$(+) \times (+) = (+)$	$2 \times 5 = 10$ or $5 \times 2 = 10$
$(+) \times (-) = (-)$	$2 \times (-5) = -10$
$(-) \times (+) = (-)$	$(-2) \times (5) = -10$
$(-) \times (-) = (+)$	$(-2) \times (-5) = +10$
$(+) \div (+) = (+)$	$+10 \div +5 = +2$
$(-) \div (-) = (+)$	$(-10) \div (-5) = +2$
$(+) \div (-) = (-)$	$+10 \div (-5) = (-2)$
$(-) \div (+) = (-)$	$(-10) \div (+5) = (-2)$

Handwritten notes:
 - "opposite signs" (circled in pink) next to the first two rows.
 - "negative answer" (circled in pink) next to the second and third rows.
 - "opposite signs" (circled in pink) next to the last two rows.
 - "Answer will ALWAYS be (-)negative" (circled in pink) next to the last two rows.

In summary... Same Sign = Positive. Different Sign = Negative.

PRACTICE

103. $4 \times 6 = 24$	104. $-8(3) = (-24)$	105. $(-11)(-5) = 55$	106. $-2 \times 23 = (-46)$
107. $-55 \div 5 = (-11)$	108. $-5 \div (-5) = (-1)$	109. $(44) \div (-4) = (-11)$	110. $-20 \div 4 = (-5)$
111. $-9 \times -5 = 45$	112. $-5(5) = (-25)$	113. $(9)(-4) = (-36)$	114. $-20 \times 3 = (-60)$

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NO CALCULATOR! multiply normally as if there is NO DECIMAL.

Example 6: Multiplying decimals

Handwritten notes:
 - "1 dp + 1 dp = 2 dp" (above a) and b)
 - "count the total number of decimal place, and give the answer that many decimals" (circled in purple)
 - "move 2 places" (above a)
 - "2 dp" (above b) and c)

a) $1.5 \times 1.8 = 2.70$

$$\begin{array}{r} 15 \\ \times 18 \\ \hline 120 \\ +150 \\ \hline 270 \end{array}$$

b) $(-1.2)(0.3) = -0.36$

$$\begin{array}{r} 12 \\ \times 3 \\ \hline 36 \end{array}$$

c) $(-4)(-1.02) = 4.08$

$$\begin{array}{r} 102 \\ \times 4 \\ \hline 408 \end{array}$$

PRACTICE

Estimate and then determine the product. **NO calculator**

217. $2.34 \times 6.8 = 2.34$	218. $62.8 \times 46.2 =$	219. $72.9 \times 66.12 =$	220. $112.04 \times 50.19 =$
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PRACTICE

NO calculator

Estimate and then determine the product.

HW

217. $2.34 \times 6.8 =$ $\begin{array}{r} 234 \\ \times 68 \\ \hline 1872 \\ 14040 \\ \hline 15912 \end{array}$ <p style="text-align: center;">3 dec. imbs</p>	218. $62.8 \times 46.2 =$	219. $72.9 \times 66.12 =$	220. $112.04 \times 50.19 =$
221. $15.3 \times 6.8 =$ 15.912	222. $-22.7 \times 4.2 =$	223. $-32.9(-26.2) =$	224. $112 \times (-0.29) =$

Example 7: On February 5, 2008, the price of share in CIBC changed by $-\$1.640$. Dan owns 35 shares. By how much did those shares change in value that day?

1 share changed by -1.640
 so, 35 shares changed by $35 \times (-1.640)$

$$\begin{array}{r} 1640 \\ \times 35 \\ \hline 8200 \\ +49200 \\ \hline 57400 \end{array} = 57.400$$

$$\begin{array}{c} \oplus \quad \ominus \quad \uparrow = \ominus \\ \quad \quad \quad 3 \text{ dp} \end{array}$$

Dan's shares changed by $-\$57.40$

Evaluate.

115. $(1)(1) = +1$	116. $(1)(-1) = -1$	117. $(-1)(-1) = +1$
118. $(-1)(-1)(-1) = +1(-1) = -1$	119. $(-1)(-1)(-1)(-1) = (+1)(+1) = +1$	120. $(-1)(-1)(-1)(-1)(-1) = -(+1)(+1) = -1$

- Answer the following with a yes or a no.
- | | |
|--|-----------------------|
| 121. If two negative numbers are multiplied together will their product be positive? | Yes \oplus |
| 122. If three negative numbers are multiplied together will their product be positive? | No, will be \ominus |
| 123. If four negative numbers are multiplied together will their product be positive? | Yes \oplus |
| 124. If an even number of negative numbers are multiplied together will their product be positive? | Yes \oplus |
| 125. If an odd number of negative numbers are multiplied together will their product be positive? | No, will be \ominus |

Multiplying MORE THAN 1 Integer...How do + and - signs apply?

PRACTICE

Determine whether each product is positive or negative. evaluate.

134. $(-31)(-14)(-91) = -39494$ Negative ✓	135. $(-12)(-51)(-19)(-1) =$	136. $(-101)(-1)(-1)(-199) =$
137. $(-11)(-2)(-12)(2)(-31) =$	138. $(-1)(11)(-1)(51)(-1)(-2) =$	139. $(-5)(-92)(-1)(-19)(-2) =$

Find the product.

140. $2 \times 3 \times 1 =$	141. $-2 \times 5 \times (-1) =$	142. $-4 \times (-3) \times (-1) =$
143. $-1 \times (-2) \times 3 \times (-1) =$	144. $1 \times (-2) \times 5 \times (-1) =$	145. $-1 \times (-1) \times (-1) \times (-4) =$

HW practice Q's p. 8 + 9

$$143. -1 \times (-2) \times 3 \times (-1) =$$

$$144. 1 \times (-2) \times 5 \times (-1) =$$

$$145. -1 \times (-1) \times (-1) \times (-4) =$$

$$146. (-1)(-2)(-1)(2)(-1)(-2) =$$

$$147. (-1)(1)(-1)(5)(-1)(-2) =$$

$$148. (-5)(-2)(-1)(-1)(-2) =$$

P. 8 + 9

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★ Review: $(+) \div (+) =$ $(-) \div (-) =$ $(-) \div (+) =$ $(+) \div (-) =$ ★

Warm Up: Dividing Integers

a) $8 \div (-2) =$ _____

b) $(-12) \div (-3) =$ _____

Example 8: Dividing Integers *with Decimals*.

a) $(-1.38) \div 0.6$

b) $(-2.56) \div (-0.4)$

Estimate and then evaluate each quotient. Round your answer to 1 decimal place.

225. $234 \div 6 =$

226. $1204 \div 5 =$

227. $24 \div 7 =$

228. $-534 \div 8 =$

$$6 \overline{)234}$$

Example 9: Determine the missing number in each division statement.

a) $[\quad] \div (-2.6) = 9.62$



Complete all "*practice*" questions in this booklet
Section 1.2 pg 18-19
Questions #1-11, *12, *15

(some of these questions you may have all ready done-yesterday's homework was:
#1,2,5,7,8ab,10,*12)

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