

## Math - Section 3.4: Multiplying Rational Numbers

Recall: Multiply Integers:

- ① The sign of the product is positive if the signs of both integers are the same

$$(ex) \quad (+2) \times (+3) = +6$$

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

- ② The sign of the product is negative if the signs of both integers are different

$$(ex) \quad (+5) \times (-6) = -30$$

$$(ex) \quad (-8) \times (+10) = -80$$

Example #1 Determine each product:

$$(a) \quad \left(-\frac{1}{7}\right) \times \left(-\frac{3}{4}\right) = \frac{(-1) \times (-3)}{(1) \times (4)} = \frac{3}{4}$$

$$(b) \quad \left(2\frac{2}{3}\right) \cdot \left(-1\frac{3}{4}\right) = \left(\frac{8}{3}\right) \left(-\frac{7}{4}\right) = \frac{-14}{3} \\ = -4\frac{2}{3}$$

Practice: Multiply:  $(-3 \frac{1}{4})(2 \frac{2}{3})$

$$(Ans) \left(-\frac{13}{4}\right)\left(\frac{28}{3}\right) = \frac{-26}{3} = -8 \frac{2}{3}$$

Example #2: On Feb 5, 2008, the price of a share in CIBC changed by  $-\$1.64$ . A person owns 35 shares. How much did the person lose?

$$(Ans) 35 \times (-1.64) = -\$57.40$$

Practice: Determine each product:

$$(A) \quad (0.8)(-2.4)$$

$$(Ans) \quad -1.92$$

$$(B) \quad (-1.25)(-2.84)$$

$$(Ans) \quad 3.55$$

Homework:

P127 - 128

#5, 7, 9, 12, 14

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$$\underline{\#7} \quad (a) \left(-\frac{1}{3}\right) \left(\frac{2}{5}\right) = \frac{-2}{15}$$

$$\underline{\#9} \quad (a) (120)(-0.80) = -\$96$$

#14 Cost of Painting Trucks =

$$(a) 25 \times 3457.25 = \$86431.25$$

$$(b) \text{Bank Balance: } 45567.87 - 86431.25$$

$$= -\$40863.38$$

$$\underline{\#12(c)} \quad \left(-2 \frac{8}{9}\right) \left(5 \frac{1}{8}\right) = \left(-\frac{26}{9}\right) \left(\frac{41}{8}\right) = \frac{-533}{36}$$

$$= -14 \frac{29}{36}$$