

## Section 3.5: Dividing Rational Numbers

- ① Follow the same process for multiplying rational numbers but include the following:
- Change the division symbol to multiplication.
  - Change the second fraction using reciprocals.

Example #1: Determine each quotient:

$$\begin{aligned} \text{(a)} \quad \left(-\frac{5}{8}\right) \div \left(\frac{3}{4}\right) &= \left(-\frac{5}{8}\right) \times \left(\frac{4}{3}\right) \\ &= \frac{-20}{24} = \frac{-5}{6} \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad \left(-4\frac{1}{5}\right) \div \left(-3\frac{1}{3}\right) &= \left(-\frac{21}{5}\right) \div \left(-\frac{10}{3}\right) \\ &= \left(-\frac{21}{5}\right) \times \left(-\frac{3}{10}\right) \\ &= \frac{63}{50} = 1\frac{13}{50} \end{aligned}$$

Example #2: Determine the quotient:

$$(a) (-1.38) \div 0.6 = -2.3$$

$$(b) (-0.25) \div (-0.3) = 0.8\bar{3}$$

Example #3 : Determine the missing numbers in each division statement:

$$(A) \square \div (-2.6) = 9.62$$

\* To find the missing number;  
Use the opposite operation  
and multiply the 2 decimals

$$\therefore \square = 9.62 \times (-2.6)$$

$$= -25.012$$

$$(b) \left(-\frac{5}{8}\right) \div \square = -\frac{15}{56}$$

$$5 \times 2 = 10$$

$$10 \div 5 = 2$$

$$\text{Ans) } \left(-\frac{5}{8}\right) \div \left(\frac{-15}{56}\right) = \left(\frac{-5}{8}\right) \times \left(\frac{-56}{15}\right)$$

$$= \frac{7}{3} \text{ or } 2\frac{1}{3}$$

Homework:

pg 135-136

#9 a, c, e, 11 a

12 a, c, e, 15, 17