

## Curriculum Outcome

**N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.**

**Student Friendly:**  
"Dividing fractions and decimals "

# Dividing Rational Numbers

Remember FRACTIONS are just numbers!

THUS



The properties are still the same.

$$(+)\div(+)=(+)$$

\* When two rational numbers have the same sign, their quotient is positive.

$$(-)\div(-)=(+)$$

\* When two rational numbers have the different signs, their quotient is negative.

$$(+)\div(-)=(-)$$

$$(-)\div(+)=(-)$$

Determine the sign of each quotient

a)  $\left(\frac{-3}{4}\right) \div \left(\frac{-7}{8}\right)$

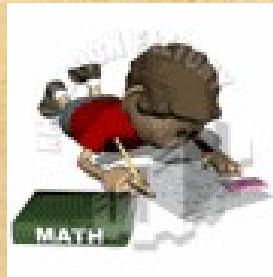
+

b)  $\left(\frac{-2}{5}\right) \div \left(\frac{6}{7}\right)$

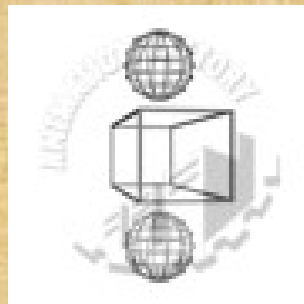
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c)  $7.8 \div 3.6$

+



# Dividing Fractions



• Every **non-zero** fraction has a reciprocal.

• Fractions with a denominator of "0" are undefined.  $\left(\frac{6}{0}\right)$

• [Redacted]

• [Redacted]

• [Redacted]

reciprocal

$$-\frac{2}{3}$$

$$\overset{\text{rec}}{-\frac{3}{2}}$$

$$-2\frac{1}{5}$$



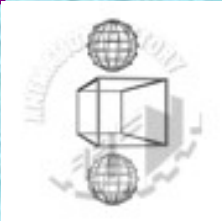
$$=$$

$$-\frac{11}{5}$$

$$\overset{\text{rec}}$$

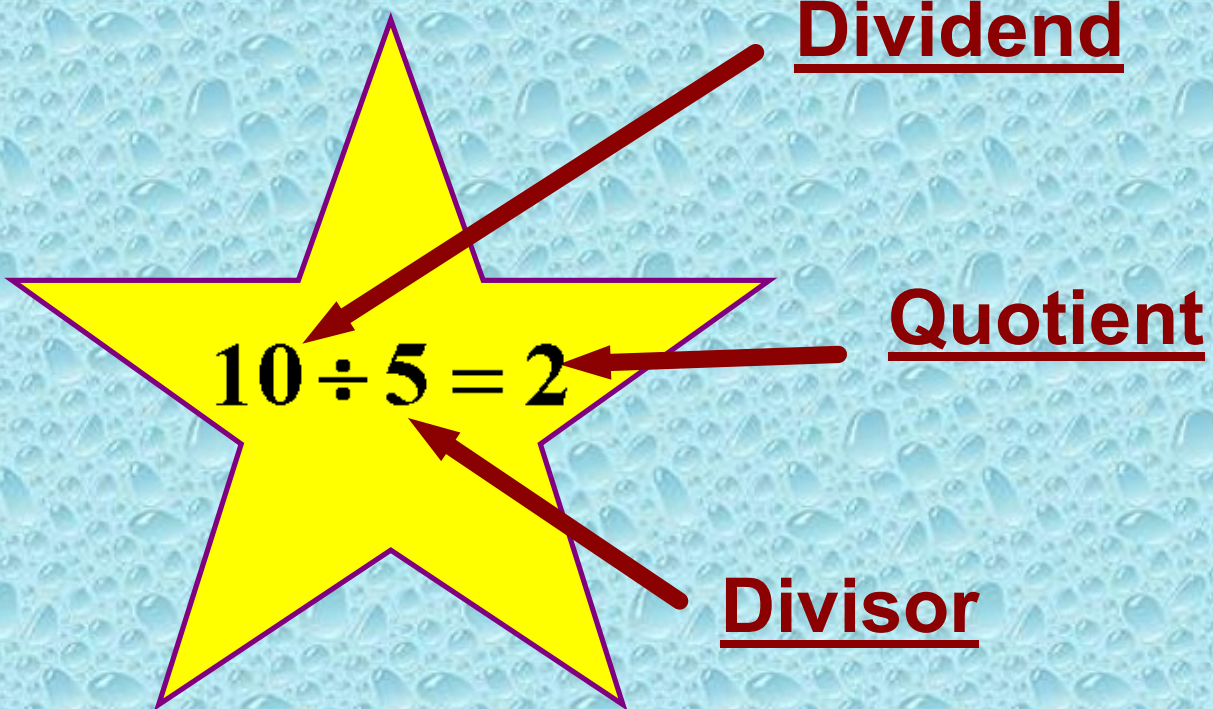
$$-\frac{5}{11}$$

**Express each  
division question as  
a multiplication  
question !!!!**

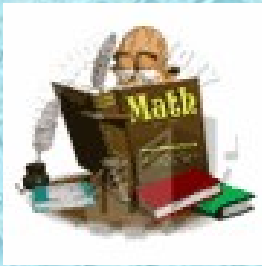




# Terminology







\_\_\_\_\_s  
\_\_\_\_\_ divided by the  
\_\_\_\_\_

$$\frac{4}{5} \div \frac{1}{3} =$$

$$\frac{4}{5} \times \frac{3}{1} = \frac{12}{5}$$

<http://www.youtube.com/watch?v=80WArGwAjt8&feature=related>

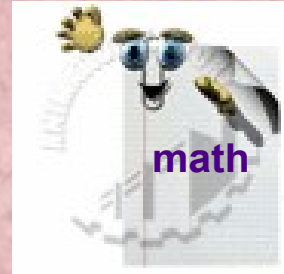
<http://www.youtube.com/watch?v=80WArGwAjt8&feature=related> why to flip and multiply?

<http://www.youtube.com/watch?v=05rL51flamk&feature=channel> fraction rap

<http://www.youtube.com/watch?v=OGUaN-F80NA&NR=1>

<http://www.youtube.com/watch?v=7GaeC4IPaSo>

Try These !!



#1

$$\frac{4}{5} \div \frac{7}{8} =$$

$$\frac{4}{5} \times \frac{8}{7} = \frac{32}{35}$$

#2

$$\frac{1}{8} \div \frac{-6}{5}$$

$$\frac{1}{8} \times \frac{-5}{6}$$

$$= \frac{-5}{48}$$



#3



$$2\frac{1}{4} \div \frac{5}{1} =$$

$$\frac{9}{4} \times \frac{1}{5}$$

$$= \frac{9}{20}$$

# *Class / Homework*

## Practice Problems

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3ace

4

8

9 a, c, e

Fraction Rap



Write out the questions and then show all work to get to the answer.