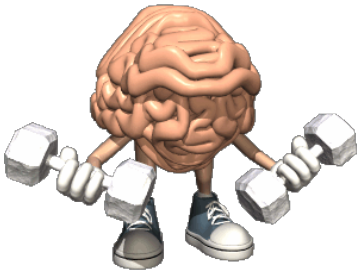


Warm-Up

Evaluate the following expressions:

1) $-\frac{11}{6} - \frac{5}{8} + \frac{1}{4}$

$-\frac{44}{24} - \frac{15}{24} + \frac{6}{24} = -\frac{53}{24}$

2) $(-4.55)(7.28)$

-33.124

3) $\left(-\frac{2}{7}\right) \cdot \left(\frac{-1}{3}\right)$

$\frac{2}{21}$

4) $\left(-3\frac{3}{4}\right)\left(-2\frac{1}{3}\right)$

$\left(-\frac{15}{4}\right)\left(-\frac{7}{3}\right)$

$\frac{35}{4}$

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**.

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

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

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

Determine the sign of each quotient

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

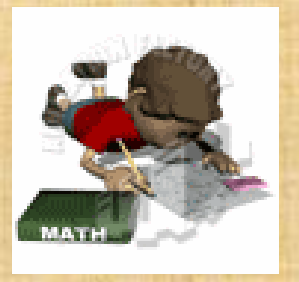
+

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

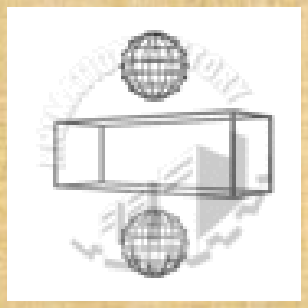
−

c) $7.8 \div 3.6$

+



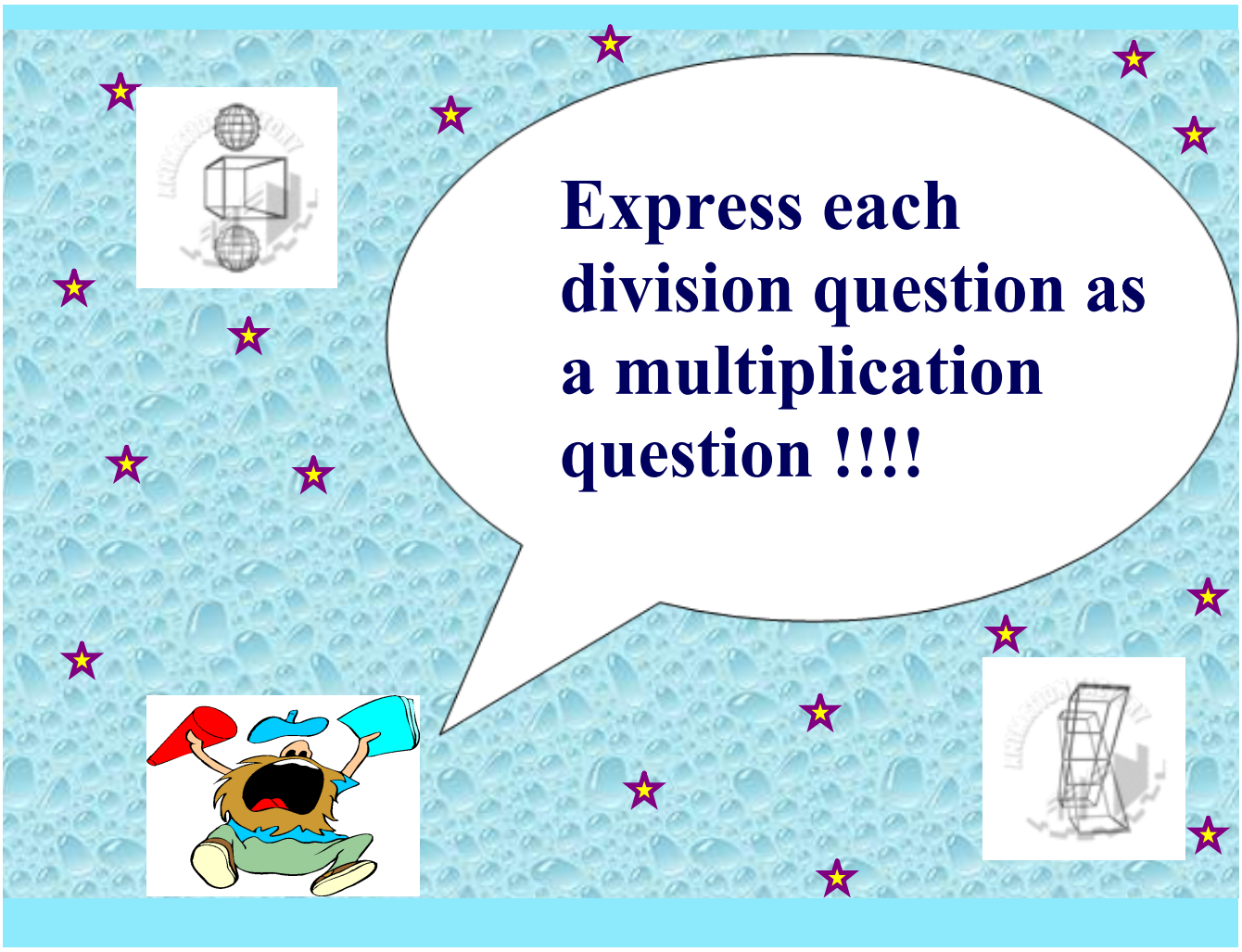
Dividing Fractions

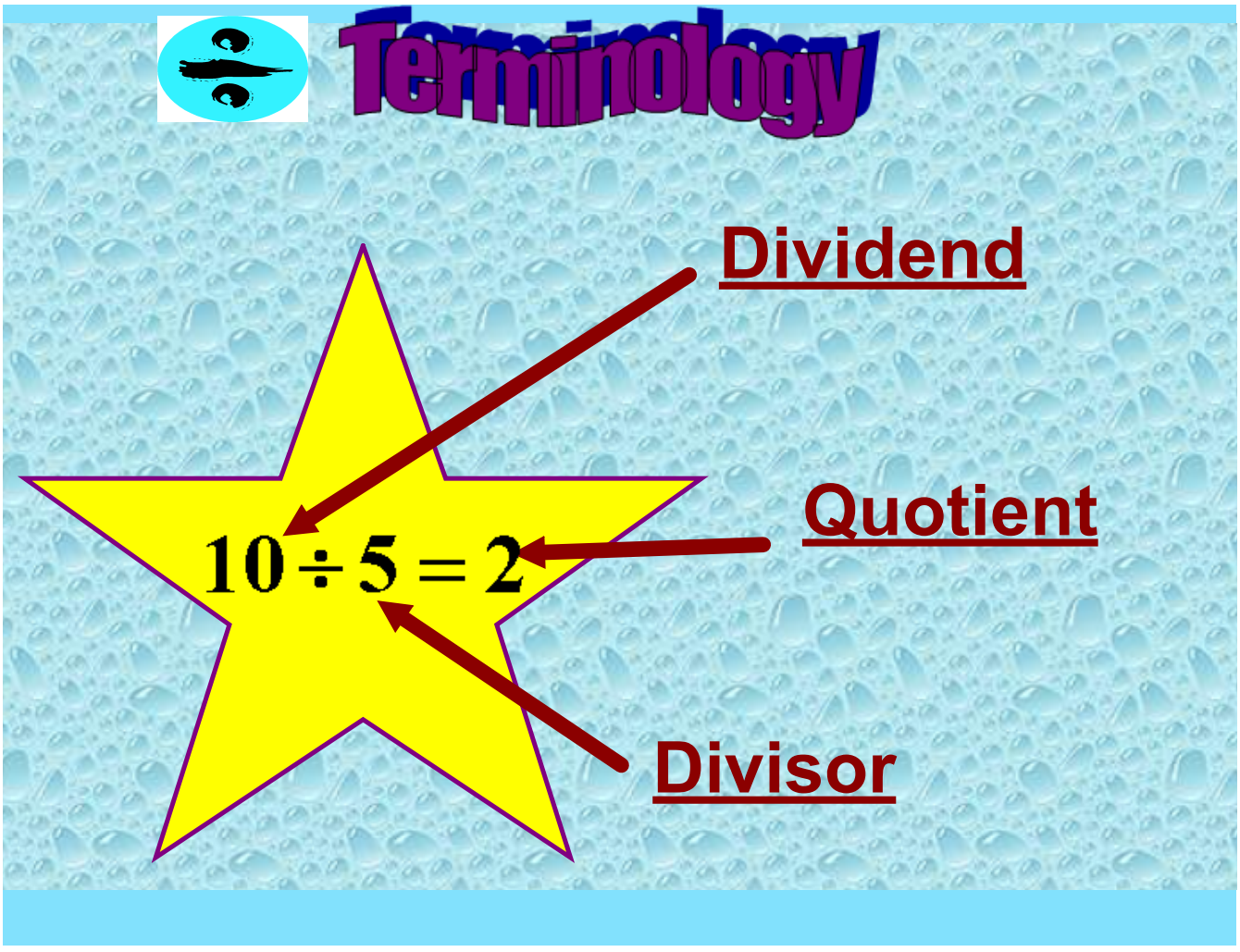


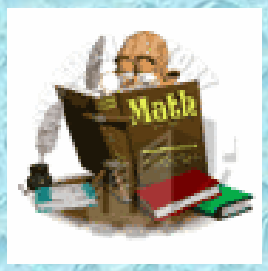
Reciprocal

- Every non-zero fraction has a reciprocal.
- Fractions with a denominator of "0" are undefined. $\left(\frac{6}{0}\right)$
- To find the reciprocal of a fraction, you simply flip the fraction !!

$\frac{4}{5}$ $\frac{5}{4}$


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


Terminology
Dividend
Quotient
Divisor
10 ÷ 5 = 2



Dividing Fractions

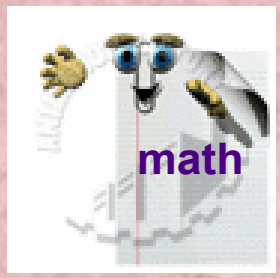
Multiply the dividend by the reciprocal of the divisor !!

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

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

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

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

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

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

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

Determine the missing number in the division statement.

Missing Dividend

$12 \div 4 = 3$

Think:
Division is the inverse of **Multiplication.**

To Solve for Missing Dividend
take Divisor X Quotient

$(\_\_) = 3 \times 4$

Why this works

$(\underline{12}) \div 4 = 3$ ✓

To Solve for Missing Dividend
take Divisor X Quotient

Now with Rational #s

You Try

A) $(\quad) \div \left(\frac{5}{11}\right) = \frac{3}{7}$

$\frac{3}{7} \times \frac{5}{11} = \frac{15}{77}$

B) $\_\_\_\_ \div 12.6 = 4.2$

4.2×12.6

52.92

Determine the missing number in the division statement.

Missing Divisor

$15 \div (\_\_) = -5$

$15 \div -5 = -3$

Think:
Quotient is negative thus the BLANK must be what sign? _____

To solve for missing Divisor
take Dividend ÷ Quotient

$15 \div (\_\_) = -5$

Why this works

$15 \div (\_\_) = -5$ ✓ (-3)

To solve for missing Divisor
take Dividend ÷ Quotient

You Try

1) $-2.5 \div \_\_\_ = 5$

$-2.5 \div 5$

$= -0.5$

2) $\left(\frac{-12}{21}\right) \div (\ \ ) = \frac{5}{8}$

$\frac{-12}{21} \div \frac{5}{8}$

$\frac{-12}{21} \times \frac{8}{5} = -\frac{96}{105}$

Determine the missing number in the division statement.

Divisor Missing &Fractions

$\left(\frac{-6}{7}\right) \div (\quad) = \frac{18}{49}$

The Quotient is Positive

Thus the divsor is _____

$-\frac{6}{7} \div \frac{18}{49}$

Divsor = Dividend ÷ Quotient

Use the strategy of multilpying by the reciprocal

$-\frac{16}{17} \times \frac{49^{7}}{18_{3}} = -\frac{7}{3}$

Simplify

Your Turn

A) $\left(\frac{15}{26}\right) \div (\ ) = \frac{-3}{2}$

$\frac{15}{26} \div \frac{-3}{2}$

$\frac{\cancel{15}^{5}}{\cancel{26}_{13}} \times \frac{-2\!\!\!/^{1}}{3_{1}} = \frac{-5}{13}$

Class / Homework

Practice Problems

Page 134-136

3ace
4bdf
8
9 a, c, e

11a
12bdf
17 a, b, c, d
18 a

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

Fraction Rap