Before we begin, are there any questions from last day's work?

Work on p. 530 #1, 3, 4, 5 (*Sheet on last screen*)

4bf 3e 5d

(*) Check.

3e) $(5)(-9) \div (-3)(7)$

$= -45 \div (-3)(7)$

$= +15(7)$

$= 105$

Confirmed: The correct answer is 105; the textbook is *incorrect*! the answer is *NOT* 15/7.

-5^2 vs $(-5)^2$

$= -(5)(5)$

$= -25$

4 b) $(-5)^2 \div (\div 7) \div (\div 12)$

$= (-5)(-5) + 7 - 12$

$= 25 + 7 - 12$

$= 32 - 12$

$= 20$

4 f) $8 \div (-4) + 4 \div (-2)^2$

$= 8 \div (-4) + 4 \div 4$

$= -2 + 1$

$= -1$

5 d) $\dfrac{-5 + (-3)(-6)}{(-2)^2 + (-3)^2}$

$= \dfrac{-5 + 18}{4 + 9}$

$= \dfrac{+13}{13}$

$= 1$

Rational Numbers

Date: Feb. 6/18
(Every lesson)

Set of rational numbers $Q = \left\{ \frac{a}{b} \mid a,b \in I, b \neq 0 \right\}$

Ex. 1) Simplify the following (**always** reduce to lowest terms)

a) $\frac{3}{4} \times \frac{5}{7}$

$= \frac{15}{28}$

b) $\frac{1}{2} \times \frac{10}{9}$

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

$= \frac{5}{9}$

c) $\frac{2}{3} \div \frac{6}{7}$

$= \frac{2}{3} \times \frac{7}{6}$

$= \frac{1 \times 7}{3 \times 3}$

$= \frac{7}{9}$

d) $\frac{8}{9} \div \frac{2}{5}$

$= \frac{8}{9} \times \frac{5}{2}$

$= \frac{20}{9}$

e) $\frac{3}{4} + \frac{2}{5}$

$= \frac{15}{20} + \frac{8}{20}$

$= \frac{23}{20}$

f) $\frac{3}{5} - \frac{2}{15}$

$= \frac{9}{15} - \frac{2}{15}$

$= \frac{7}{15}$

g) $\frac{-4}{3} - \frac{2}{3}$

$= \frac{-4-2}{3}$

$= \frac{-6}{3}$

$= -2$

h) $\frac{7}{8} - \frac{3}{2}$

$= \frac{7}{8} - \frac{12}{8}$

$= \frac{-5}{8}$

Ex. 2) Simplify the following (**always** reduce to lowest terms)

a) $\frac{-2}{3}+\frac{3}{-2}-\frac{3}{10}$

$=\frac{-2}{3}-\frac{3}{2}-\frac{3}{10}$

$=\frac{-20}{30}-\frac{45}{30}-\frac{9}{30}$

$=\frac{-74}{30}$

$=\frac{-37}{15}$

b) $\frac{3}{4}\times\frac{-4}{5}\div\frac{-3}{7}$

$=\frac{3}{4_1}\times\frac{-4^{-1}}{5}\times\frac{-7}{3_1}$

$=+\frac{7}{5}$

c) $\left(-2\frac{1}{3}\right)\div\left(-3\frac{2}{5}\right)$

$=\frac{-7}{3}\div\left(\frac{-17}{5}\right)$

$=\frac{-7}{3}\times\left(\frac{-5}{17}\right)$

$=+\frac{35}{51}$

Homework Practice: p. 532 #1 - 4

Reminder:

$\frac{10}{-2}$ $\frac{-10}{2}$ $-\frac{10}{2}$

$=-5$ $=-5$ $=-5$