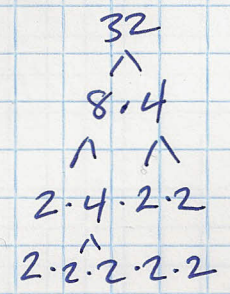
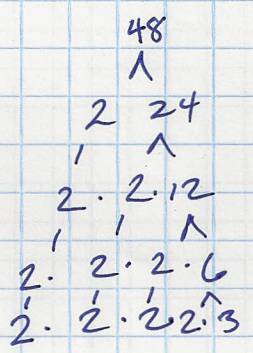
Operations on Rational Numbers
Pre-Assessment Solutions

(1) Find the GCF of 32 & 48





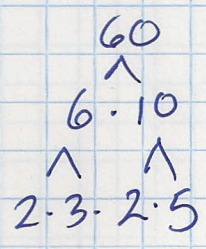
$32 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

$48 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3$

$GCF = 2 \cdot 2 \cdot 2 \cdot 2 = 16$

$\boxed{GCF(32, 48) = 16}$

(2) Use a factor tree to find the prime factorization of 60.



$2 \cdot 2 \cdot 3 \cdot 5 = 60$

$\boxed{2^2 \cdot 3 \cdot 5 = 60}$

(4) Write $-27/8$ as a decimal

$\frac{(-)}{(+)} = (-)$

$$8 \overline{)27.000}$$

-24

30

-24

60

-56

40

-40

0

3.375

$\boxed{\frac{-27}{8} = -3.375}$

(3) Compare using $<, >$ or $=$.

a) $.40 \_\_\_ \frac{3}{8}$

$\frac{3}{8} = .375$ division

$.40 > \frac{3}{8}$

b) $-\frac{9}{10} \_\_\_ -.89$

$\frac{-9}{10} = -.9$

$\frac{-9}{10} < -.89$

(5) Write 0.64 as a fraction

$0.64 =$ sixty four hundredths

$= \frac{64}{100} \div 2 = \frac{32}{50} \div 2$

$= \frac{16}{25}$

$0.64 = \frac{16}{25}$

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

$(-)\cdot(-) = (+)$

$\frac{-3}{5} \cdot \frac{-3}{1} = \frac{9}{5}$

$\left(\frac{-3}{5}\right) \div \left(\frac{-1}{3}\right) = \frac{9}{5}$

(7) $2\frac{1}{5} - 3\frac{1}{3} = 2\frac{1}{5} + {}^{-}3\frac{1}{3}$

GAV is (-) so answer is (-)

$3\frac{1}{3} = \frac{5}{15}$

$-2\frac{1}{5} = \frac{3}{15}$

$1 \quad \frac{2}{15}$

← signs are different so subtract

$2\frac{1}{5} - 3\frac{1}{3} = -1\frac{2}{15}$

$= \frac{-17}{15}$

(8) $.89 + \frac{2}{5}$

$\frac{2}{5} = 0.4$

$$\begin{array}{r} {\scriptstyle 1} \\ .89 \\ +\ .40 \\ \hline 1.29 \end{array}$$

$\boxed{.89 + \frac{2}{5} = 1.29}$

(9) $9.7 \div .5$

$\boxed{9.7 \div .5 = 19.4}$

$$\begin{array}{r} 19.4 \\ .5\overline{)9.700} \\ -5\downarrow \\ \hline 47 \\ -45 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

(10) $.8 - (-7.3) = .8 + 7.3$

$$\begin{array}{r} {\scriptstyle 1} \\ 7.3 \\ +\ .8 \\ \hline 8.1 \end{array}$$

$\boxed{.8 - (-7.3) = 8.1}$