



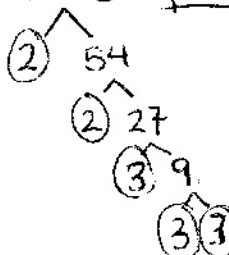
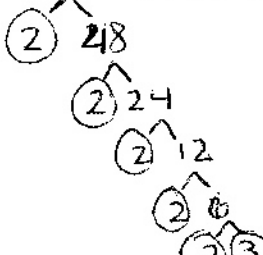
Concepts on Test #1 M311 Sp12

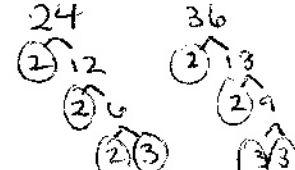
Ex. 1: a) $\frac{2}{3}$  b) $1\frac{3}{4}$ 

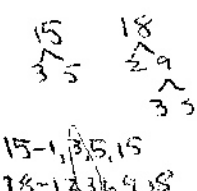
c) $\frac{9}{5}$ 
 $= 1\frac{4}{5}$

Ex 2: $108 - 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108$
 $96 - 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96$

Ex 3: GCF = $\boxed{12}$

Ex 4: $108 = \boxed{2^2 \cdot 3^3}$  $96 = \boxed{2^5 \cdot 3}$ 

Ex 5: a) $\frac{24}{36} = \frac{\cancel{2} \cdot \cancel{2} \cdot 2 \cdot 3}{\cancel{2} \cdot \cancel{2} \cdot 3 \cdot 3} = \boxed{\frac{2}{3}}$

 $\frac{24 \div 12}{36 \div 12} = \boxed{\frac{2}{3}}$

b) $2\frac{15}{18} = \frac{2 \cdot 5}{2 \cdot 3 \cdot 3} \Rightarrow \boxed{2\frac{5}{6}}$

 $2\frac{15 \div 3}{18 \div 3} \Rightarrow \boxed{2\frac{5}{6}}$

24 - 1, 2, 3, 4, 6, 8, 12, 24
 36 - 1, 2, 3, 4, 6, 9, 12, 18, 36

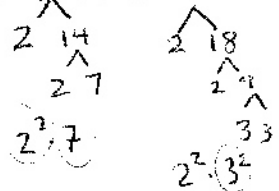
Ex 6: a) $28 \& 36$

$LCD = 2^2 \cdot 3^2 \cdot 7$
 $= 252$

b) $8 \& 10$

$LCD = 2^3 \cdot 5$
 $= 40$

	$\frac{2}{28}$	$\frac{3}{36}$	$\frac{7}{252}$
28	2	3	7
36	2	3	3



	$\frac{2}{8}$	$\frac{5}{10}$
8	2	5
10	2	5

Concepts Concl p.2

Ex 7: $2\frac{3}{5} \Rightarrow \frac{(2 \times 5) + 3}{5} = \boxed{\frac{13}{5}}$

Ex 8: $\frac{17}{5} \Rightarrow \begin{array}{r} 3R2 \\ 5 \overline{)17} \\ \underline{-15} \\ 2 \end{array} \boxed{3\frac{2}{5}}$

Ex 9: $\frac{7}{48} + \frac{12}{48} = \frac{7+12}{48} = \boxed{\frac{19}{48}}$

Ex 10: $\frac{36}{48} + \frac{2}{48} = \frac{36+2}{48} = \frac{38}{48} = \frac{2 \cdot 19}{2 \cdot 2 \cdot 2 \cdot 3} = \boxed{\frac{19}{24}}$

Ex 11: a) $\frac{13^2}{36^2} + \frac{23^3}{24^3} = \frac{26}{72} + \frac{69}{72} = \frac{95}{72} = \boxed{1\frac{23}{72}}$
 LCD = $2^3 \cdot 3^2 = 2^2 \cdot 3^2 = 2^3 \cdot 3$
 $72 \overline{)95}$

b) $\frac{1^5}{6^5} + \frac{3^3}{10^3} = \frac{5}{30} + \frac{9}{30} = \frac{14 \div 2}{30 \div 2} = \boxed{\frac{7}{15}}$
 LCD = $2 \cdot 3 \cdot 5 = 30$
 $14 = 1, 7, 14$
 $30 = 12, 3, 5, 6, 10, 15, 30$

c) $542\frac{13}{36} - 237\frac{23}{24}$
 LCD = $2^3 \cdot 3^2 = 72$
 $36 = 2^2 \cdot 3^2$
 $24 = 2^3 \cdot 3$

$$\begin{array}{r} 542\frac{13 \cdot 2}{36 \cdot 2} - 237\frac{23 \cdot 3}{24 \cdot 3} \\ \hline 542\frac{26}{72} - 237\frac{69}{72} \\ \hline 304\frac{29}{72} \end{array}$$

d) $278\frac{3}{4} + 895\frac{3}{4}$

$$\begin{array}{r} 278\frac{3}{4} \\ + 895\frac{3}{4} \\ \hline 1173\frac{6}{4} \end{array} = 1173 + \frac{6 \div 2}{4 \div 2} = 1173 + 1\frac{1}{2} = \boxed{1174\frac{1}{2}}$$

Ex 12: a) $\left(\frac{3}{16}\right)\left(\frac{4}{7}\right) = \boxed{\frac{3}{28}}$ (b) $\frac{4}{30} \div \frac{5}{14} = \frac{4}{30} \cdot \frac{14}{5} = \frac{2}{15} \cdot \frac{14}{5} = \boxed{\frac{28}{75}}$

Concepts of T#1 con'd p. 3

Ex 12: c) $1\frac{1}{5} \cdot 2\frac{2}{5} = \frac{6}{5} \cdot \frac{12}{5} = \frac{72}{25} = \boxed{2\frac{22}{25}}$

d) $5 \div 2\frac{2}{3} = \frac{5}{1} \div \frac{8}{3} = \frac{5}{1} \cdot \frac{3}{8} = \frac{15}{8} = \boxed{1\frac{7}{8}}$

Ex 13: flour = $2\frac{1}{2}$ c
sugar = $\frac{1}{8}$ c
salt = $\frac{1}{16}$ c

Total Dry = flour + sugar + salt = ? cups

$\Rightarrow 2\frac{14}{28} + \frac{12}{82} + \frac{1}{16}$

$2\frac{8}{16} + \frac{2}{16} + \frac{1}{16} = \boxed{2\frac{11}{16} \text{ cups of dry ingredients}}$

Ex 14: $C = 2\pi r \Rightarrow C = 2\left(\frac{22}{7}\right)\left(\frac{58}{1}\right) = \frac{4 \cdot 58}{7} = \frac{232}{7} = \boxed{33\frac{1}{7} \text{ m}}$

$\pi = \frac{22}{7}$

$r = 5\frac{3}{11} \text{ m}$

Ex 15: flour = $2\frac{2}{3}$ cups

Half Flour = $\frac{1}{2} \cdot \text{Flour} = ?$ cups

$\Rightarrow \frac{1}{2} \cdot 2\frac{2}{3} = \frac{1}{2} \cdot \frac{8}{3} = \frac{4}{3} = \boxed{1\frac{1}{3} \text{ cup of flour}}$

Ex 16: length = $3\frac{1}{8}$ yards

items = 6

Each Piece = length \div # = ? yards

$\Rightarrow 3\frac{1}{8} \div 6 = \frac{25}{8} \cdot \frac{1}{6} = \boxed{\frac{25}{48} \text{ yards each}}$

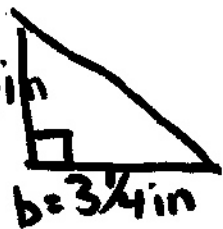
Concepts Test #1 p. 4

Ex 17:

$$\boxed{P = ? \text{ ft}} \quad w = 3\frac{3}{4} \text{ ft}$$
$$l = 1\frac{2}{3} \text{ ft}$$

$$P = l + l + w + w \text{ or } 2l + 2w$$
$$\left. \begin{aligned} & 2\left(\frac{2}{3}\right) + 2\left(\frac{3}{4}\right) \\ & = 2\left(\frac{5}{3}\right) + 2\left(\frac{3}{4}\right) \\ & = \frac{10}{3} + \frac{6}{4} \\ & = \frac{40}{12} + \frac{18}{12} = \frac{58}{12} \\ & = \frac{29}{6} = \boxed{4\frac{5}{6} \text{ ft}} \end{aligned} \right\}$$

Ex. 18:



$$A = \frac{1}{2}bh$$

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

$$= \frac{1}{2}\left(\frac{13}{4}\right)\left(\frac{1}{2}\right) = \boxed{\frac{13}{16} \text{ in}^2}$$

Ex 19: Plot $2\frac{2}{3}$, $\frac{2}{5}$ & $\frac{15}{4} = 3\frac{3}{4}$

