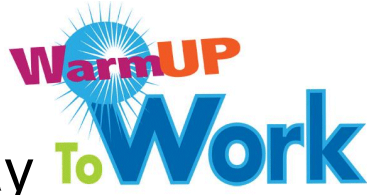


Feb. 4, 2020

Grade 8

## Test Thursday

1) Gail just received her pay of \$1800. She pays one-ninth to the hydro company and two-fifths for rent.

a) How much does she pay to the hydro?

$$\frac{1}{9} \text{ of pay} = \text{hydro}$$

$$\frac{1}{9} \times \frac{1800}{1} = \$200$$

b) How much does she have left of her pay after the bills are paid?

$$\begin{aligned} \text{Rent} &= \frac{2}{5} \text{ of Pay} \\ &= \frac{2}{5} \text{ of } \frac{1800}{1} \\ &= \frac{3600}{5} \\ &= \$720 \end{aligned}$$

$$\begin{aligned} \text{Rent} + \text{Hydro} \\ 720 + 200 \\ \$920 \end{aligned}$$

$$\begin{aligned} \text{Left} \\ 1800 - 920 \\ = \$880 \end{aligned}$$

pg 151

Homework  
Solutions

3 a)  $\frac{2}{3} + \frac{1}{4}$   
 $\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$   
 cups of liquid

b)  $\frac{1}{3}$  of 165  
 $\frac{1}{3} \times 165 = \frac{165}{3} = 55$   
 $\frac{1}{3}$  of 150 = 50  
 $\frac{1}{3}$  of 15 = 5  
 55 silver cups

c)  $\frac{3}{4} - \frac{3}{8}$   
 $\frac{6}{8} - \frac{3}{8} = \frac{3}{8}$   
 She need  $\frac{3}{8}$  more

d)  $\frac{5}{12} \times 2 = \frac{10}{12}$  was shared

4  $\frac{2}{3} + \frac{1}{4}$   
 $\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$  He had  $\frac{11}{12}$  cans of paint.

5.  $5 \div \frac{1}{8}$   
 $5 \times \frac{8}{1} = 40$   
 The team scored 40 goals.  
 $\frac{1}{8}$  of Total = 5  
 $\frac{1}{8} \times \text{Total} = 5$   
 $\frac{1}{8}$  is 5  
 so  $\frac{8}{8} = 8 \times 5 = 40$

6. morning + afternoon  
 $\frac{1}{6} + \frac{1}{3}$   
 $\frac{1}{6} + \frac{2}{6} = \frac{3}{6}$  or  $\frac{1}{2}$   
 $\frac{1}{2}$  attended in the evening

b)  $\frac{1}{2}$  of 30  
 $\frac{1}{2} \times 30 = \frac{30}{2}$   
 = 15 parents attended in the evening

7.  $\frac{3}{4} - \frac{1}{6}$

$$\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$$

Her lunch was  $\frac{7}{12}$  of an hour.

Homework

Solutions

8.  $\frac{2}{5}$  of 2400

$$\begin{aligned} \frac{2}{5} \times 2400 &= \frac{4800}{5} \\ &= 960 \end{aligned}$$

\$960 is paid for rent

9.  $48 \div \frac{2}{3}$

$$\begin{aligned} 48 \times \frac{3}{2} &= \frac{144}{2} \\ &= 72 \text{ cm} \\ &\text{in one hour} \end{aligned}$$

$$\begin{array}{l} 48 \text{ cm in } \frac{2}{3} \text{ hour} \\ \div 2 \\ \hline 24 \text{ cm in } \frac{1}{3} \text{ hour} \\ \times 3 \\ \hline 72 \text{ cm} \\ \times 3 \\ \hline 1 \text{ hour} \end{array}$$

$$10 \quad \frac{1}{6} + \frac{1}{4} + \frac{3}{8}$$

$$\frac{4}{24} + \frac{6}{24} + \frac{9}{24} = \frac{19}{24}$$

Homework

Solutions

$$\text{Rock} \quad \frac{24}{24} - \frac{19}{24} = \frac{5}{24}$$

$$11. \quad \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{5}{6}$$

$$\approx \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + 1 = 2\frac{1}{2}$$

not much remains,  
maybe  $\frac{1}{4}$

$$b) \quad \frac{3}{8} \times 3 = \frac{9}{8} \text{ or } 1\frac{1}{8}$$

$$c) \quad \frac{19}{24} + \frac{5}{6}$$

$$\frac{19}{24} + \frac{20}{24} = \frac{47}{24}$$

$$d) \quad 2\frac{1}{2} - \frac{47}{24}$$

$$2\frac{12}{24} - \frac{47}{24}$$

$$2\frac{6}{24} - \frac{47}{24} = \frac{13}{24}$$

pg 151

Homework

Solutions

12.  $\frac{1}{4}$  of  $\frac{1}{3}$

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

They  $\frac{1}{12}$  on the first day

13.  $\frac{4}{5}$  of the bottle was left

$$\frac{3}{4} \times \frac{4}{5} = \frac{12}{20} \text{ or } \frac{3}{5}$$

The calf had  $\frac{3}{5}$  of the bottle.

14.  $2\frac{5}{6} \div \frac{4}{1}$

$$\frac{17}{6} \times \frac{1}{4} = \frac{17}{24}$$

loaves for each type  
of sandwich.

Order of Operations with Fractions

B - Brackets

~~E~~ - Exponents

DM - Multiplication and Division in the order they occur

AS - Addition and Subtraction in the order they occur common denominators

Examples:

(a)  $\frac{5}{16} - \frac{3}{8} \times \frac{2}{3}$

$\frac{5}{16} - \frac{6}{24}$  (with annotations:  $3 \div 3$ ,  $8 \div 2$ ,  $2 \div 2$ ,  $6 \div 6$ ,  $24 \div 6$ )

$= \frac{5}{16} - \frac{1}{4}$  (with annotations: "check to see if Reduce",  $4 \times 4$ )

$= \frac{5}{16} - \frac{4}{16}$

$= \frac{1}{16}$

OR Reduce after  $\times$

$\frac{3}{4} - \frac{15}{48}$  (with annotations: "Now Reduce",  $3 \div 3$ )

$= \frac{3}{4} - \frac{5}{16}$  (with annotation:  $4 \div 4$ )

(b)  $\frac{3}{4} - \frac{2}{3} \div \frac{4}{5} \times (\frac{1}{8} + \frac{1}{4})$

$= \frac{3}{4} - \frac{2}{3} \div \frac{4}{5} \times \frac{3}{8}$  (with annotations:  $8 \div 2$ ,  $4 \div 2$ )

$= \frac{3}{4} - \frac{2}{3} \times \frac{5}{4} \times \frac{3}{8}$  (with annotations: "flip and mult",  $4 \div 4$ )

$= \frac{3}{4} - \frac{10}{12} \times \frac{3}{8}$  (with annotations: "Reduce first",  $10 \div 2$ ,  $12 \div 2$ )

$= \frac{3}{4} - \frac{5}{6} \times \frac{3}{8}$  (with annotations: "Reduce as I go",  $6 \div 3$ )

$= \frac{3}{4} - \frac{5}{2} \times \frac{1}{8}$  (with annotations: "Reduce as I go",  $3 \div 3$ )

$= \frac{3}{4} - \frac{5}{16}$  (with annotations:  $4 \times 4$ , "Need C.D")

$= \frac{12}{16} - \frac{5}{16}$  (with annotations:  $12 \div 4$ ,  $16 \div 4$ )

$= \frac{7}{16}$

Order of Operations with Fractions

B - Brackets

E - Exponents

DM - Multiplication and Division in the order they occur

AS - Addition and Subtraction in the order they occur common denominators

Examples:

(a)  $\frac{5}{16} - \frac{3}{8} \times \frac{2}{3}$

$$\begin{aligned} &\frac{5}{16} - \frac{6}{24} \\ &\frac{5}{16} - \frac{1}{4} \\ &\frac{5}{16} - \frac{4}{16} \\ &\frac{1}{16} \end{aligned}$$

(b)  $\frac{3}{4} - \frac{2}{3} \div \frac{4}{5} \times (\frac{1}{8} + \frac{1}{4})$

$$\begin{aligned} &\frac{3}{4} - \frac{2}{3} \div \frac{4}{5} \times (\frac{1}{8} + \frac{2}{8}) \\ &\frac{3}{4} - \frac{2}{3} \times \frac{5}{4} \times \frac{3}{8} \\ &\frac{3}{4} - \frac{10}{12} \times \frac{3}{8} \\ &\frac{3}{4} - \frac{30}{96} \quad \text{or} \quad \frac{3}{4} - \frac{5}{16} \\ &\frac{72}{96} - \frac{30}{96} \quad \frac{12}{16} - \frac{5}{16} \\ &\frac{42}{96} = \frac{7}{16} \quad \frac{7}{16} \end{aligned}$$

# Class/Homework

Test ~~Wednesday, Feb 5~~

Thursday Feb 6

pg. 155 #4(do it out as well), #5 to #6 (Show Work)



959



pg 155

$$4 \ a) \frac{1}{3} \times \left( \frac{7}{8} - \frac{3}{4} \right)$$

$$\frac{1}{3} \times \left( \frac{7}{8} - \frac{6}{8} \right)$$

$$\frac{1}{3} \times \frac{1}{8} = \frac{1}{24}$$

$$b) \frac{7}{8} \div \left( \frac{1}{3} \times \frac{1}{8} \right)$$

$$\frac{7}{8} \div \frac{1}{24}$$

$$\frac{7}{8} \times \frac{24}{1} = 21$$



$$c) \frac{5}{9} \times \left( \frac{3}{5} \div \frac{1}{6} \right)$$

$$\frac{5}{9} \times \left( \frac{3}{5} \times \frac{6}{1} \right)$$

$$\frac{5}{9} \times \frac{18}{5} = \frac{270}{45}$$

$$= 6$$

$$d) \left( \frac{5}{3} + \frac{7}{12} \right) \times \frac{4}{9}$$

$$\left( \frac{20}{12} + \frac{7}{12} \right) \times \frac{4}{9}$$

$$\frac{27}{12} \times \frac{4}{9} = \frac{108}{108} = 1$$

(or  $\frac{108}{108} = 1$ )

$$5. \frac{5}{10} + \frac{3}{6} \times \frac{1}{2}$$

$$\frac{5}{10} + \frac{3}{12}$$

$$\frac{5}{10} + \frac{2.5}{10}$$

$$= \frac{7.5}{10} = \frac{3}{4}$$

Raj was correct.

$$\begin{aligned}
 a) \quad & \frac{1}{2} \times \frac{3}{5} + \frac{1}{4} \\
 & \frac{3}{10} + \frac{1}{4} \\
 & \frac{6}{20} + \frac{5}{20} = \frac{11}{20}
 \end{aligned}$$

$$\begin{aligned}
 b) \quad & \frac{2}{3} + \frac{5}{6} \div \frac{1}{2} \\
 & \frac{2}{3} + \frac{5}{6} \times \frac{2}{1} \\
 & \frac{4}{3} + \frac{10}{6} \\
 & \frac{4}{6} + \frac{10}{6} = \frac{14}{6} \text{ or } \frac{7}{3}
 \end{aligned}$$

$$\begin{aligned}
 c) \quad & \frac{4}{5} \div \frac{7}{10} + \frac{1}{3} \\
 & \frac{4}{5} \times \frac{10}{7} + \frac{1}{3} \\
 & \frac{40}{35} + \frac{1}{3} \\
 & \frac{24}{21} + \frac{7}{21} = \frac{31}{21}
 \end{aligned}$$

$$\begin{aligned}
 d) \quad & \frac{1}{4} \times \left( \frac{11}{12} - \frac{5}{6} \right) \\
 & \frac{1}{4} \times \left( \frac{11}{12} - \frac{10}{12} \right) \\
 & \frac{1}{4} \times \frac{1}{12} = \frac{1}{48}
 \end{aligned}$$

$$\begin{aligned}
 e) \quad & \frac{1}{2} \times \left( \frac{4}{5} \div \frac{3}{10} \right) \\
 & \frac{1}{2} \times \left( \frac{4}{5} \times \frac{10}{3} \right) \\
 & \frac{1}{2} \times \frac{40}{3} = \frac{40}{30} \\
 & = \frac{4}{3}
 \end{aligned}$$

$$\begin{aligned}
 f) \quad & \left( \frac{3}{5} + \frac{7}{15} \right) \times \frac{5}{6} \\
 & \left( \frac{9}{15} + \frac{7}{15} \right) \times \frac{5}{6} \\
 & \frac{16}{15} \times \frac{5}{6} = \frac{80}{90} \\
 & = \frac{8}{9}
 \end{aligned}$$

Discuss pages 156-157 Checking and Reflecting

Chris's sister used  
 $\frac{1}{4}$  of stamps left on roll  
 $\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

Stamps used

$$\frac{1}{12} + \frac{2}{3}$$
$$\frac{1}{12} + \frac{8}{12} = \frac{9}{12} = \frac{3}{4}$$

Stamps left

$$1 - \frac{3}{4} = \frac{1}{4} \text{ of stamps left}$$