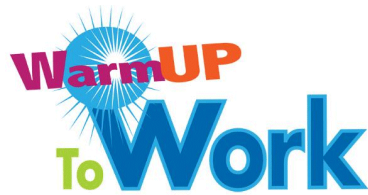


Dec. 13



Grade 8

$$\begin{aligned}
 & 1) 2\frac{7}{8} \div 1\frac{1}{5} \\
 & \quad \downarrow \\
 & \quad \frac{23}{8} \div \frac{6}{5} \\
 & \quad \frac{23}{8} \times \frac{5}{6} \\
 & \quad \frac{115}{48} \\
 & \quad 2\frac{19}{48}
 \end{aligned}$$

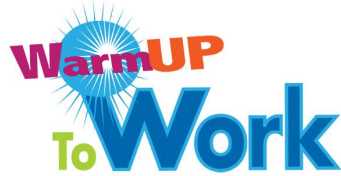
2) A car can travel 66 km in  $\frac{3}{4}$  of an hour. How far will it travel in 1 hour?

$$\begin{aligned}
 & \frac{66}{1} \div \frac{3}{4} \\
 & \frac{66}{1} \times \frac{4}{3} \div 3 \\
 & \frac{22}{1} \times \frac{4}{1} \\
 & \frac{88}{1} \\
 & 88
 \end{aligned}$$

$$\begin{aligned}
 & \frac{3}{4} \text{ of hour} = 66 \text{ km} \\
 & \quad \div 3 \\
 & \rightarrow \frac{1}{4} \text{ of hour} = 22 \\
 & \quad \times 4 \\
 & \rightarrow \frac{4}{4} \text{ of hour} = 88
 \end{aligned}$$

A car can travel 88 km in 1 hour.

Dec. 13

Grade 8

$$1) 2\frac{7}{8} \div 1\frac{1}{5}$$

$$\frac{23}{8} \div \frac{6}{5}$$

$$\frac{23}{8} \times \frac{5}{6}$$

$$\frac{115}{48} = 2\frac{19}{48}$$

- 2) A car can travel 66 km in  $\frac{3}{4}$  of an hour. How far will it travel in 1 hour?

$$\begin{array}{l} \left( \begin{array}{l} \frac{3}{4} \text{ of hour} = 66 \text{ km} \\ \div 3 \end{array} \right. \\ \left. \begin{array}{l} \frac{1}{4} \text{ of hour} = 22 \text{ km} \\ \times 4 \end{array} \right) \\ \frac{4}{4} \text{ of hour} = 88 \text{ km} \end{array}$$

The car can travel 88 km in 1 hour

Or

$$66 \div \frac{3}{4}$$

$$\frac{66}{1} \times \frac{4}{3} = \frac{264}{3} = 88$$

pg 151

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

$\frac{1}{3}$  of car = Silver  
 Homework Solutions  
 b)  $\frac{1}{3}$  of 165  
 $\frac{1}{3} \times \frac{165}{1} = \frac{165}{3} = 55$   
 $\frac{1}{3}$  of 150 = 50  
 $\frac{1}{3}$  of 15 = 5  
 55 silver cars

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  
 $\frac{1}{2} \times \frac{30}{1} = \frac{30}{2}$   
 = 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

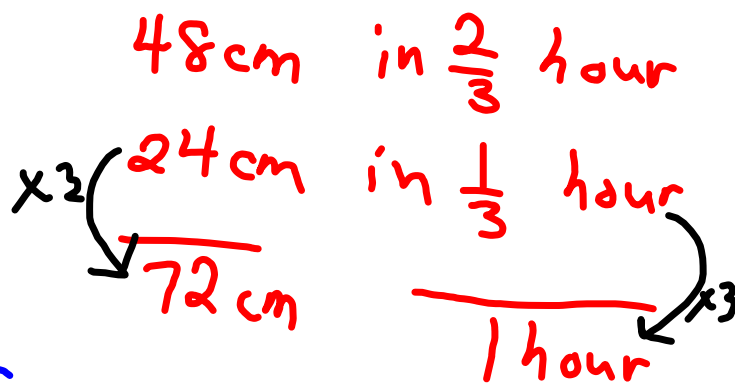
8.  $\frac{2}{5}$  of 2400

$\frac{2}{5} \times \frac{2400}{1} = \frac{4800}{5}$   
 $= 960$

\$960 is paid for rent

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

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



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

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

Homework  
Solutions

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

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

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

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

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

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

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

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

$$2\frac{12}{24} - \frac{47}{24} = \frac{13}{24}$$

pg 150

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

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

loaves for each type  
of sandwich.

You try  Grade 8

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?

$$\frac{1}{9} \text{ of } \boxed{\text{Pay}} = \text{hydro}$$

$$\frac{1}{9} \times \frac{1800}{1} = \frac{1800}{9} = \$200 \text{ goes to hydro.}$$

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

Rent

$$\frac{2}{5} \text{ of } \frac{1800}{1}$$

$$\frac{2}{5} \times \frac{1800}{1}$$

$$= \frac{3600}{5}$$

$$= \$720$$

goes to Rent

$$\underbrace{720 + 200}_{920}$$

Spent on Bills

$$\$1800 - \$920$$

\$880 is left after Gail pays her bills.



Grade 8

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?

$$\frac{1}{9} \text{ of Pay} = \text{Hydro}$$

$$\frac{1}{9} \text{ of } 1800$$

\$200 is for Hydro

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

$$\frac{2}{5} \text{ of Pay} = \text{Rent}$$

$$\frac{2}{5} \times \frac{1800}{1}$$

$$\frac{3600}{5}$$

\$720 is for Rent

$$+ \frac{200 \text{ for hydro}}{\underline{\hspace{1.5cm}}}$$

\$920 for rent and hydro

$$1800 - 920$$

\$880 Left

Gail has \$880 left after paying rent + hydro.



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

$\frac{5}{16} - \frac{6 \div 6}{24 \div 6}$

check does it reduce

$\frac{5}{16} - \frac{1 \times 4}{4 \times 4}$

need C.D.

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

$\frac{1}{16}$

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

Need C.D

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

$\frac{3}{4} - \frac{2}{3} \div \frac{4}{5} \times \frac{3}{8}$

flip and x

$\frac{3}{4} - \frac{2 \div 2}{3} \times \frac{5}{4 \div 2} \times \frac{3}{8}$

$\frac{3}{4} - \frac{1}{3} \times \frac{5}{2} \times \frac{3}{8}$

(Reduce each step)

$\frac{3}{4} - \frac{5}{6} \times \frac{3}{8}$

$\frac{3}{4} - \frac{15 \div 3}{48 \div 3}$

Reduce

$\frac{3 \cdot 4}{4 \cdot 4} - \frac{5}{16}$

Need C.D

$\frac{12}{16} - \frac{5}{16}$

$\frac{7}{16}$

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 Tuesday, Dec. 19

pg. 155 #4(do it out as well), ~~#5~~ <sup>ant</sup> #6 (Show Work) <sup>abc d</sup>



B - Brackets

E - Exponents

DM - Multiplication and Division in the order they occur

AS - Addition and Subtraction in the order they occur <sup>common denominators</sup>

pg 155

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

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

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

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

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

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



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

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

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

$$= 6$$

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

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

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

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

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

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

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

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

Raj was correct.

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

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

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

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

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

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

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

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