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?

$\frac{66}{1} \div \frac{3}{4}$

$\frac{66}{1} \times \frac{4}{3}$ (÷3)

$\frac{22}{1} \times \frac{4}{1}$

$\frac{88}{1}$

88

$\frac{3}{4}$ of hour = 66 km (÷3)

$\frac{1}{4}$ of hour = 22 (×4)

$\frac{4}{4}$ of hour = 88

A car can travel 88 km in 1 hour.

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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?

$\frac{3}{4}$ of hour = 66 km

÷3 ÷3

$\frac{1}{4}$ of hour = 22 km

x4 x4

$\frac{4}{4}$ of hour = 88 km

The car can travel 88 km in 1 hour

Or

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

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

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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

$\frac{1}{3}$ of car = Silver

Homework Solutions

$\frac{1}{3}\times\frac{165}{1}=\frac{165}{3}=55$

$\frac{1}{3}$ 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. $5\div\frac{1}{8}$

$5\times\frac{8}{1}=40$

$\frac{1}{8}$ of Total = 5

$\frac{1}{8}\times$ Total = 5

$\frac{1}{8}$ is 5

so $\frac{8}{8}=8\times 5$

$=40$

The team scored 40 goals.

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

Homework Solutions

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.

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

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

$= 960$

$960 is paid for rent

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

$48 \times \frac{3}{2} = \frac{144}{2}$

$= 72$cm in one hour

48cm in $\frac{2}{3}$ hour

x3 (24cm in $\frac{1}{3}$ hour

72 cm

x3)

1 hour

Homework
Solutions

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

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

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

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

$\approx \frac{1}{2}+\frac{1}{2}+\frac{1}{2}+1\approx 2\frac{1}{2}$ not much remains, maybe $\frac{1}{4}$

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

c) $\frac{9}{8}+\frac{5}{6}$

$\frac{27}{24}+\frac{20}{24}=\frac{47}{24}$

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

$\frac{5}{2}-\frac{47}{24}$

$\frac{60}{24}-\frac{47}{24}=\frac{13}{24}$

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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

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

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

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

$\frac{17}{6} \times \frac{1}{4} = \frac{17}{24}$ leaves for each type of sandwich.

You try WarmUP To Work

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?

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

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

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

Rent

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

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

$= \frac{3600}{5}$

= $720 goes to Rent

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?

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

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

$200 is for Hydro

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

$\frac{2}{5}$ of Pay = Ren

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

$\frac{3600}{5}$

$720 is for Rent

+ 200 for hyro

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

$\frac{5}{16} - \frac{6}{24}$ ÷6 ÷6

Check does it reduce

$\frac{5}{16} - \frac{1\times4}{4\times4}$ 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

$\frac{3}{4} - \frac{2}{3} \times \frac{5}{4} \times \frac{3}{8}$ (÷2 ÷2)

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

(Reduce each step)

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

$\frac{3}{4} - \frac{15}{48}$ ÷3 ÷3 Reduce

$\frac{3\cdot4}{4\cdot4} - \frac{5}{16}$ Need C.D

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

$\frac{7}{16}$

Order of Operations with Fractions

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common denominators

Examples:

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

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

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

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

$\frac{1}{16}$

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

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

$\frac{3}{4} - \frac{10}{12} \times \frac{3}{8}$

$\frac{3}{4} - \frac{30}{96}$

$\frac{72}{96} - \frac{30}{96}$

$\frac{42}{96} = \frac{7}{16}$

or

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

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

$\frac{7}{16}$

Class/Homework

Test Tuesday, Dec. 19

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

Do We need More?

B - Brackets
E - Exponents
DM - Multiplication and Division in the order they occur
AS - Addition and Subtraction in the order they occur

common denominators

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

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

$\frac{7}{\cancel{8}_{1}} \times \frac{\cancel{24}^{3}}{1} = 2$

c) $\frac{9}{5} \times \left(\frac{3}{5} \div \frac{1}{10}\right)$

$\frac{9}{5} \times \left(\frac{3}{5} \times \frac{10}{1}\right)$

$\frac{9}{5} \times \frac{30}{5} = \frac{270}{25}$

$= \frac{54}{5}$

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

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

$\frac{\cancel{27}^{9}}{\cancel{12}_{3}} \times \frac{\cancel{4}^{1}}{\cancel{9}_{1}} = \frac{3}{3}$

$= 1$

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

5. $\frac{5}{9} + \frac{2}{3} \times \frac{1}{2}$

$\frac{5}{9} + \frac{2}{6}$

$\frac{10}{18} + \frac{6}{18} = \frac{16}{18}$

$= \frac{8}{9}$

Raj was correct.

6. a) $\frac{1}{2} \times \frac{3}{5} + \frac{1}{4}$

$\frac{3}{10} + \frac{1}{4}$

$\frac{6}{20} + \frac{5}{20} = \frac{11}{20}$

b) $\frac{2}{3} + \frac{5}{6} \div \frac{1}{2}$

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

$\frac{2}{3} + \frac{10}{6}$

$\frac{4}{6} + \frac{10}{6} = \frac{14}{6}$ or $\frac{7}{3}$

c) $\frac{4}{5} \div \frac{7}{10} + \frac{1}{3}$

$\frac{4}{5} \times \frac{10}{7} + \frac{1}{3}$

$\frac{40}{35} + \frac{1}{3}$

$\frac{8}{7} + \frac{1}{3}$

$\frac{24}{21} + \frac{7}{21} = \frac{31}{21}$

d) $\frac{1}{4} \times \left(\frac{11}{12} - \frac{5}{6}\right)$

$\frac{1}{4} \times \left(\frac{11}{12} - \frac{10}{12}\right)$

$\frac{1}{4} \times \frac{1}{12} = \frac{1}{48}$

e) $\frac{1}{2} \times \left(\frac{4}{5} \div \frac{3}{10}\right)$

$\frac{1}{2} \times \left(\frac{4}{5} \times \frac{10}{3}\right)$

$\frac{1}{2} \times \frac{40}{15} = \frac{40}{30}$

$= \frac{4}{3}$

f) $\left(\frac{3}{5} + \frac{7}{15}\right) \times \frac{5}{6}$

$\left(\frac{9}{15} + \frac{7}{15}\right) \times \frac{5}{6}$

$\frac{16}{15} \times \frac{5}{6} = \frac{80}{90}$

$= \frac{8}{9}$

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

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