

Fractions ReviewKnowledge and Understanding:1. Solve the following questions: Show all your work.

*oops - missed Mixed fractions!

a) $\frac{3}{7} \times \frac{1}{6}$

$$= \frac{3}{42}$$

b) $\frac{5}{20} + \frac{13}{20}$

$$= \frac{18}{20}$$

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

b) $\frac{3}{5} \div \frac{3}{4}$

$$= \frac{3}{5} \times \frac{4}{3}$$

$$= \frac{12}{15}$$

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

d) $\frac{7}{8}$ of $(12-8)^3$

$$= \frac{7}{8} \times (4)^3$$

$$= \frac{7}{8} \times 64$$

$$= 56$$

c) $\frac{4 \times 7}{5 \times 7} - \frac{3 \times 5}{7 \times 5}$

$$= \frac{28}{35} - \frac{15}{35}$$

$$= \frac{13}{35}$$

e) $6 + 5^2 \times (3+2)$

$$= 6 + 25 \times 5$$

$$= 6 + 125$$

$$= 131$$

$$\frac{6+4}{5} \div \frac{3}{7} - \frac{1}{4} \times \frac{1}{5}$$

$$= \frac{6}{5} + \frac{4}{7} \times \frac{4}{3} - \frac{1}{20}$$

$$= \frac{6}{5} + \frac{16}{21} - \frac{1}{20}$$

$$= \frac{5}{5} + \frac{16}{21}$$

$$= 1 \frac{16}{21}$$

Reduce

$$\frac{30}{66} \div 6$$

$$= \frac{5}{11}$$

$$b) \frac{12}{8} \div 4$$

$$= \frac{3}{2}$$

$$c) \frac{112}{200} \div 8$$

$$= \frac{14}{25}$$

Word prob. Review 2017

① Know Heather studied $\frac{2}{3}$ h and $\frac{1}{4}$ h

Want - Total

$$\therefore \frac{2 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} = \text{Total}$$

$$\frac{8}{12} + \frac{3}{12} = \text{Total}$$

$$\frac{11}{12} = \text{Total}$$

\therefore She studied for $\frac{11}{12}$ of an hour.

② Know: Jill has $\frac{2}{3}$ of a full bag of cookies

Jack ate $\frac{1}{5}$ of $\frac{2}{3}$ (Jill's amount)

Want: portion of Jill's cookies that Jack ate

$$= \frac{1}{5} \times \frac{2}{3}$$

$$= \frac{2}{15}$$

\therefore he ate $\frac{2}{15}$ of Jill's cookies

③ Know $\frac{1}{20}$ mammals are marsupials, 4250 known ~~marsupial~~ mammals

Want: How many mammals are marsupials

$$\frac{1}{20} \text{ of } 4250 = \frac{1}{20} \times 4250$$

$$= \frac{4250}{20}$$

$$=$$

④ Know: $\frac{1}{3}$ of the world was covered in forest

$\frac{2}{3}$ of $\frac{1}{3}$ has been cleared

Want: What fraction is now covered by forest

Solution 1

$$\begin{aligned}\text{Forest Cleared} &= \frac{2}{3} \times \frac{1}{3} \\ &= \frac{2}{9}\end{aligned}$$

$$\begin{aligned}\text{Forest left} &: \frac{1 \times 3}{3 \times 3} - \frac{2}{9} \\ &= \frac{3}{9} - \frac{2}{9}\end{aligned}$$

$$\boxed{= \frac{1}{9}}$$

Solution 2

Forest left is $\frac{1}{3}$

$$\circ \circ \frac{1}{3} \text{ of } \frac{1}{3}$$

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

$$\boxed{= \frac{1}{9}}$$

$\circ \circ \frac{1}{9}$ of world is now covered in forest

⑤ Know: baker has $5\frac{1}{2}$ cups baking soda

baker NEEDS $\frac{1}{3}$ cup to make a batch buns

Want: # Batches he can make

Batches = Total I have \div amount needed

$$= 5\frac{1}{2} \div \frac{1}{3}$$

$$= \frac{11}{2} \times \frac{3}{1}$$

$$= \frac{33}{2}$$

$$= 16\frac{1}{2}$$

$\circ \circ$ Baker can make 16 batches of buns

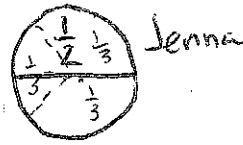
⑥ Know: Jenna ate $\frac{1}{2}$ apple, Kathy ate $\frac{1}{3}$ apple
and threw out the rest

Q - how much was thrown out

Solution 1

$$\begin{aligned} \frac{1}{2} + \frac{1}{3} &= \frac{3}{6} + \frac{2}{6} \\ &= \frac{5}{6} \end{aligned}$$

∴ $\frac{1}{6}$ was thrown out



⑦ Know: ① Jaymi ate $\frac{1}{2}$

② other $\frac{1}{2}$ cut into 3 pieces ($\div 3$)

$$\begin{aligned} \frac{1}{2} \div 3 \\ = \frac{1}{2} \times \frac{1}{3} \end{aligned}$$

= $\frac{1}{6}$ per piece] gave 2 pieces to her

(a) older sister

$$\frac{2}{6} = \frac{1}{3} \text{ to}$$

here
older
sister

took $\frac{1}{6} \div 3$ smaller pieces

$$= \frac{1}{6} \times \frac{1}{3}$$

= $\frac{1}{18}$ per 3 pieces left

b) Malcolm got $\frac{1}{18}$ of a pizza