

Unit One – MFM2P: Review Skills

Things to know...

1. How to perform addition/subtraction/multiplication/division of integers.
2. How to perform addition/subtraction/multiplication/division of fractions.
3. How to apply order of operations (BEDMAS) when simplifying expressions.
4. How to solve one variable equations by grouping terms.
5. How to solve one variable equations with a fraction on both sides of equal sign.
6. How to solve problems dealing with proportional reasoning.
7. How to solve problems related to percent, decimal and fractions.

Practice Questions

1. Evaluate the following integer expressions:

a) $-5 - (-3)$

b) $4 + (-3)$

c) $-2 - (-6)$

d) $3 \times (-9)$

e) $(-56) / (-7)$

f) $(-2) - (-3)^2$

2. Evaluate the following fractional expressions:

a) $\frac{1}{3} - 2\frac{1}{5}$

b) $-\frac{2}{3} \times \frac{3}{5}$

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

Answers: 1a) -2 b) 1 c) 4 d) -27 e) 8 f) -11 2 a) $-\frac{28}{15}$ b) $-\frac{2}{5}$ c) $\frac{7}{15}$

Review Questions: Algebra, Integers, Fractions and Percent

1. Complete the following questions on a separate page.

Evaluate

a) $\frac{1}{3} - \frac{3}{7}$

b) $\frac{2}{3} + \frac{7}{5}$

c) $\frac{5}{4} - 3\frac{1}{2}$

d) $\frac{3}{5} + 4$

Solve the following problem

- e) Berry Tea is made by mixing 5 parts water with 2 parts tea and 3 parts sugar. If we want to make berry tea using 5 litres of sugar, how much tea and water must be mixed in?
- f) James and Janelle each write the same multiple choice math test. James scores a grade of 65% and Janelle scores a grade of 80%. If the test is based on 40 questions, how many more questions did Janelle get correct compared to James?

Ans: a) $-\frac{2}{21}$ b) $\frac{31}{15}$ c) $-\frac{9}{4}$ d) $\frac{23}{5}$ e) ~3.3 L tea and ~8.3 L water f) 6 more

2. Complete the questions on the additional pages of review.

Answers.

Fractions

1a) $\frac{3}{4}$ b) $\frac{4}{3}$ 2a) 6 b) 4 c) 16 d) 35 e) 40 f) 81 g) 4 h) 11

3a) $\frac{3}{10}$ b) $\frac{21}{40}$ c) 9 d) $\frac{18}{33}$ e) $\frac{2}{5}$ f) $\frac{1}{2}$ g) $\frac{3}{16}$ h) $\frac{15}{28}$ i) $\frac{10}{33}$ j) $\frac{6}{7}$ k) $\frac{10}{13}$

l) 3 m) $\frac{9}{2}$ n) $\frac{1}{12}$ o) $\frac{1}{14}$ p) $\frac{8}{3}$

Percent

1a) 73% b) 30% c) 14% d) 25% e) 62.5%

2a) 43% b) 92% c) 22.5% d) 107% e) 0.5%

3a) 11.25 b) 51 c) 90 d) 1.22

4a) \$180 b) \$127.50 c) \$45 d) \$7.50

Fractions, Percent, Ratio & Rate Review

A) Fractions:

1) Simplify: a) $\frac{6}{8} =$ b) $\frac{24}{18} =$

2) Write the missing information to form equivalent fractions.

a) $\frac{1}{3} = \frac{\times}{18}$

b) $\frac{\times}{36} = \frac{1}{9}$

c) $\frac{\times}{28} = \frac{4}{7}$

d) $\frac{1}{5} = \frac{7}{\times}$

e) $\frac{3}{8} = \frac{15}{\times}$

f) $\frac{18}{\times} = \frac{2}{9}$

g) $\frac{1}{\times} = \frac{9}{36}$

h) $\frac{3}{\times} = \frac{15}{55}$

3) Multiply or Divide.

a) $\frac{1}{2} \times \frac{3}{5}$

b) $\frac{3}{4} \times \frac{7}{10}$

c) $\frac{3}{5} \times 15$

d) $\frac{2}{3} \times \frac{9}{11}$

e) $\frac{3}{4} \times \frac{8}{15}$

f) $\frac{7}{3} \times \frac{3}{14}$

g) $\frac{4}{12} \times \frac{18}{32}$

h) $\frac{3}{7} \div \frac{4}{5}$

Fractions, Percent, Ratio & Rate Review

i) $\frac{2}{11} \div \frac{3}{5}$

j) $\frac{3}{4} \div \frac{7}{8}$

k) $\frac{5}{8} \div \frac{13}{16}$

l) $2 \div \frac{2}{3}$

m) $4 \div \frac{8}{9}$

n) $\frac{3}{4} \div 9$

o) $\frac{5}{7} \div 10$

p) $\frac{12}{4} \div \frac{18}{16}$

B) Percent:

1) Write each fraction as a percent.

a) $\frac{73}{100}$

b) $\frac{3}{10}$

c) $\frac{7}{50}$

d) $\frac{1}{4}$

e) $\frac{5}{8}$

2) Write each decimal as a percent.

a) 0.43

b) 0.92

c) 0.225

d) 1.07

e) 0.005

Fractions, Percent, Ratio & Rate Review

3) Calculate each of the following to one decimal place.

- a) 15% of 75 b) 75% of 68 c) 150% of 60 d) $\frac{1}{2}$ % of 244

4) Find the interest on \$1500 for one year at the following rates of interest.

- a) 12% b) 8.5% c) 3% d) $\frac{1}{2}$ %