

SHARP

Worksheet 13: Common Fractions

Grade 8 Mathematics

1. Convert these mixed number fractions to improper fractions:

a) $2\frac{19}{25}$

b) $1\frac{3}{7}$

c) $2\frac{6}{9}$

d) $3\frac{1}{3}$

e) $1\frac{2}{5}$

f) $8\frac{3}{4}$

g) $9\frac{11}{12}$

h) $7\frac{3}{8}$

i) $4\frac{1}{6}$

j) $3\frac{2}{6}$

k) $4\frac{10}{12}$

l) $7\frac{3}{10}$

2. Convert these improper fractions to mixed number fractions:

a) $\frac{18}{15}$

b) $\frac{89}{7}$

c) $\frac{27}{11}$

d) $\frac{53}{5}$

e) $\frac{44}{3}$

f) $\frac{70}{30}$

g) $\frac{61}{6}$

h) $\frac{93}{7}$

i) $\frac{60}{8}$

j) $\frac{68}{3}$

k) $\frac{328}{25}$

l) $\frac{9933}{1000}$

3. Find the simplest form of these fractions:

a) $\frac{77}{22}$

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

c) $\frac{16}{24}$

d) $\frac{81}{90}$

e) $\frac{36}{42}$

f) $\frac{45}{60}$

g) $\frac{11}{121}$

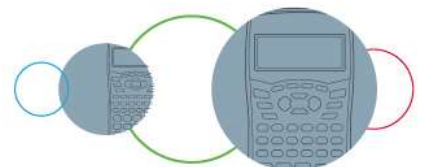
h) $\frac{30}{90}$

i) $\frac{25}{100}$

j) $\frac{21}{42}$

k) $\frac{100}{250}$

l) $\frac{93}{96}$



4. Complete the following table by filling in the missing values:

Common Fraction in Simplest Form	Percentage	Decimal
$\frac{5}{3}$		
	90%	
		0.01
$\frac{11}{12}$		
	75%	
		2.5
$\frac{11}{40}$		
	21%	
		0.125

5. Find the following. (Show all your steps and give in simplest form):

a) $\frac{9}{10}$ of 8

b) $\frac{6}{8}$ of 30

c) $\frac{9}{8}$ of 64

d) $\frac{1}{4}$ of 42

e) $\frac{5}{9}$ of 19

f) $\frac{1}{3}$ of $\frac{4}{5}$

g) $\frac{2}{5}$ of $\frac{1}{5}$

h) $\frac{4}{9}$ of $\frac{1}{3}$

i) $\frac{3}{6}$ of 47

j) $\frac{2}{7}$ of $\frac{1}{6}$

k) $\frac{3}{8}$ of $\frac{4}{9}$

l) $2\frac{1}{3}$ of 93

6. Find the answers to the following. Give your answers in simplest fraction form and show all your working out:

a) $\frac{3}{6} + \frac{4}{5}$

b) $9\frac{2}{7} - 2\frac{1}{2}$

c) $\frac{3}{7} \times \frac{1}{9}$

d) $1\frac{9}{15} + 1\frac{2}{3} - 2\frac{3}{5}$

e) $2\frac{1}{4} \times 5\frac{2}{3}$

f) $2\frac{2}{9} - 1\frac{1}{6}$

g) $\frac{2}{7} + \frac{5}{8} - \frac{1}{4}$

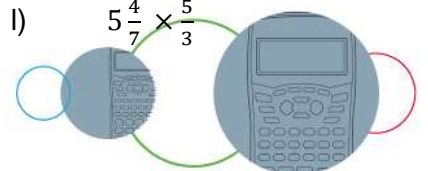
h) $1\frac{3}{8} \times 1\frac{8}{11}$

i) $\frac{10}{9} + \frac{4}{3} - 1\frac{7}{18}$

j) $9\frac{3}{4} \times \frac{12}{13}$

k) $\frac{6}{8} + 2\frac{1}{16} - 2\frac{5}{8}$

l) $5\frac{4}{7} \times \frac{5}{3}$



7. Divide the following and write your answer in simplest form:

a) $3 \div \frac{1}{2}$

b) $5 \div \frac{4}{7}$

c) $9 \div \frac{4}{6}$

d) $9 \div \frac{9}{10}$

e) $8 \div \frac{4}{5}$

f) $\frac{1}{2} \div \frac{6}{7}$

g) $\frac{28}{32} \div \frac{7}{8}$

h) $\frac{11}{7} \div \frac{121}{49}$

i) $\frac{1}{5} \div \frac{3}{8}$

j) $\frac{5}{8} \div \frac{5}{6}$

k) $\frac{3}{7} \div \frac{9}{21}$

l) $\frac{8}{17} \div \frac{32}{34}$

8. Find the answers for the following without using your calculator:

a) $\sqrt{\frac{25}{64}}$

b) $\sqrt{\frac{36}{49}}$

c) $\left(\frac{1}{4}\right)^2$

d) $\left(2\frac{1}{3}\right)^3$

e) $\left(2\frac{2}{3}\right)^2$

f) $\sqrt[3]{\frac{8}{27}}$

g) $\left(7\frac{1}{2}\right)^2$

h) $\sqrt{\frac{100}{121}}$

i) $\sqrt[3]{\frac{1}{125}}$

j) $\left(\frac{4}{5}\right)^3$

k) $\left(\frac{1}{4}\right)^3$

l) $\sqrt[3]{\frac{27}{64}}$

9. Find the following without using your calculator:

a) 92% of 180

b) 45% of 40

c) 50% of 130

d) 25% of 80

e) 65% of 5

f) 33% of 63

g) 77% of 700

h) 70% of 36

i) 20% of 420

j) 68% of 297

k) 120% of 2 268

l) 34% of 667

10. Give the percentage of each of the following (round off to two decimal places where necessary):

a) 400 out of 500

b) 897 out of 950

c) 61 out of 70

d) 30 out of 45

e) 63 out of 72

f) 92 out of 110

g) 46 out of 50

h) 54 out of 80

i) 278 out of 1 500

j) 67 out of 500

11. Give the percentage increase or decrease for each of these pairs of values:

a) 63 to 72

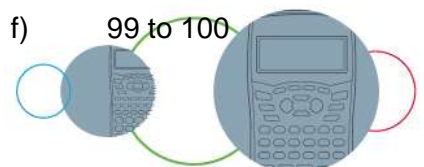
b) 24 to 48

c) 65 to 90

d) 19 to 21

e) 29 to 42

f) 99 to 100



- g) 75 to 100 h) 64 to 108 i) 32 to 36
 j) 90 to 86 k) 51 to 34 l) 64 to 56

12. Calculate the following:

- a) 390 increased by 15% b) 412 decreased by 20%
 c) 655 increased by 30% d) 980 decreased by 60%
 e) 1298 increased by 50% f) 1 349 decreased by 45%
 g) 492 increased by 11% h) 2 890 decreased by 12%
 i) 5 890 increased by 17% j) 652 decreased by 92%

13. Work out the answers for the following word sums by showing all your working out and writing your answers in full sentences.

- a) Suzy, Georgia and Bernadette do a project together. Suzy does $\frac{5}{18}$ of the project, Georgia does $\frac{2}{9}$ of the project and Bernadette does $\frac{1}{2}$ of the project.
- i) How much of the project still needs to be completed?
 ii) Who do you think should do the last section of the project? Give a reason for your answer.

- b) Bob's bling and bits is having a sale. Items in Category A are marked down by 25% and items in Category B are marked down by 45%. Find the prices for each of these items:

Bling Necklace – original price = R195 Bling Ring – original price = R340

Bling Scarf – original price = R95 Earrings – original price = R120.

- i) if they are in category A
 ii) if they are in category B.
- c) Sipho buys a car for R169 000. He pays a deposit of 15% and then makes monthly installments of 1% of the leftover amount for 9 years.
- i) What amount must Sipho pay for the deposit?
 ii) What is the monthly payment that Sipho makes?
 iii) How much does Sipho pay in total for the car?

