

# FRACTIONS, DECIMALS & PERCENTAGES

MNU 4-07a

*I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices.*

**Pupils should be able to:**

- Understand a fraction both as a number and as a division process
- Understand the idea of equivalent fractions
- Express simple fractions as decimals
- Be familiar with the decimal values of fractions out of 4, 5, 10, 20, 50, 100
- Mentally find simple fractions of quantities e.g.  $\frac{3}{5}$  of £30
- Understand the meaning of percentage
- Mentally convert simple percentages to fractions
- Convert between whole or mixed numbers and fractions
- Mentally find simple percentages of quantities e.g. 20% of 80m
- Add/subtract commonly used fractions

PUPILS SHOULD COMPLETE THE FOLLOWING EXERCISE AND ASSESS THEIR PROGRESS BY TICKING ONE OF THE OPTIONS FOR EACH TOPIC IN THE TABLE BELOW

	DEVELOPING	CONSOLIDATING	SECURE
Express simple fractions as decimals. (QUESTION 1)			
Mentally calculate:- $\frac{3}{5}$ of £30 (QUESTION 2)			
Mentally convert simple percentages to fractions and whole or mixed numbers to fractions (QUESTIONS 3 - 5)			
Mentally find simple percentages of quantities. Add/subtract commonly used fractions. (QUESTIONS 6 - 10)			

mymaths lessons: library/number/Fractions/Equivalent Fractions, Fractions to Decimals,  
Adding Subtracting Fractions  
library/number/Percentages/Frac Dec Perc 1 , Percentages of Amounts

**SELF EVALUATION EXERCISE****DATE DUE** \_\_\_\_\_

1. Write these fractions as decimals:-

a)  $\frac{1}{5}$     b)  $\frac{3}{4}$     c)  $\frac{3}{10}$     e)  $\frac{5}{8}$     f)  $\frac{7}{100}$     g)  $\frac{4}{50}$

2. Mentally find:-

a)  $\frac{4}{5}$  of 30    b)  $\frac{3}{4}$  of 320    c)  $\frac{2}{3}$  of 96    d)  $\frac{5}{7}$  of 56

3. Mentally convert these percentages to fractions:-

a) 10%    b) 5%    c)  $33\frac{1}{3}\%$     d) 15%    e) 45%    f) 60%

4. Change each of the following to mixed numbers and simplify where possible:-

a)  $\frac{18}{4}$     b)  $\frac{32}{10}$     c)  $\frac{45}{20}$     d)  $\frac{38}{8}$     e)  $\frac{165}{100}$     f)  $\frac{15}{6}$     g)  $\frac{44}{12}$

5. Change the following mixed numbers to top-heavy fractions:-

a)  $2\frac{5}{6}$     b)  $3\frac{4}{9}$     c)  $1\frac{7}{11}$     d)  $8\frac{2}{7}$     e)  $5\frac{6}{11}$

6. Mentally find:-

a) 10 % of 65    b) 20% of 420    c) 6% of 120    d) 15% of 90

7. A Xbox costs £110 to buy new. The shop then adds on VAT of 20%.  
How much does it cost now?

8. There are 30 pupils in Mr. Inglis maths class. 25% of the class got full marks  
in their recent test. How many pupils did **not** gain full marks?

9. Add the following fractions:-

a)  $\frac{3}{5} + \frac{1}{4}$     b)  $\frac{5}{8} + \frac{1}{3}$     c)  $1\frac{3}{8} + 2\frac{5}{6}$     d)  $4\frac{7}{9} + 2\frac{3}{5}$

10. Subtract the following fractions:-

a)  $\frac{8}{15} - \frac{1}{3}$     b)  $1\frac{7}{8} - \frac{3}{4}$     c)  $2\frac{5}{6} - 1\frac{1}{3}$     d)  $3\frac{1}{3} - 1\frac{2}{5}$