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Converting Fractions to Decimals and Percentages

Year 6 Challenge – 11+ Stretch

Name: _____ Date: _____

Method 1 *Make the denominator 1000*
7/40 = 175/1000 (× 25)
175/1000 = **0.175 = 17.5%**

Method 2 *Short division*
5/16 = 5 ÷ 16 = **0.3125 = 31.25%**
Recurring: 2/3 = 2 ÷ 3 = 0.666…
2/3 = **66.7% (1 d.p.)**

	A Fractions to decimals		**B** Fractions to percentages		**C** To fractions (simplest form)
1.	3/16 = _____	1.	3/40 = _____	1.	0.36 = _____
2.	7/40 = _____	2.	7/16 = _____	2.	0.875 = _____
3.	9/125 = _____	3.	1/6 = _____ (1 d.p.)	3.	12.5% = _____
4.	11/16 = _____	4.	33/150 = _____	4.	0.045 = _____
5.	5/6 = _____ (3 d.p.)	5.	11/8 = _____	5.	2.15 = _____
6.	13/80 = _____	6.	4/9 = _____ (1 d.p.)	6.	0.0625 = _____
7.	2/9 = _____ (3 d.p.)	7.	9/250 = _____	7.	37.5% = _____
8.	27/200 = _____	8.	2 1/5 = _____	8.	0.32 = _____
9.	3 5/8 = _____	9.	35/56 = _____	9.	175% = _____
10.	21/28 = _____	10.	1/125 = _____	10.	0.666… = _____
11.	7/12 = _____ (3 d.p.)	11.	5/12 = _____ (1 d.p.)	11.	2.5% = _____
12.	17/250 = _____	12.	19/400 = _____	12.	0.1875 = _____

BetterChallenge:

11+ Entry Style

a) Put these in order, starting with the smallest: 0.38 3/8 37% 7/20 0.4

b) Which is the odd one out? 0.15 3/20 15% 6/40 1/15 Explain why.

c) Find the number exactly halfway between 0.3 and 2/5. Write it as a fraction in its simplest form and as a percentage.

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Solve these 11+ style questions.

1. In a survey of 240 pupils, 3/8 chose football, 0.2 chose netball and 30% chose swimming. The rest chose tennis. How many pupils chose tennis?

2. Write these numbers in order, starting with the largest:
   1.2 5/4 118% 1 1/6 1.19

3. Ali scored 34/40 in Maths and 42/50 in English. He scored 83% in Science.
   In which subject did he do best? By how many percentage points was his best score higher than his lowest?

4. A jacket normally costs £80. Shop A takes 1/4 off. Shop B takes 30% off.
   Shop C takes £15 off and then a further 10% off the new price. Which shop is cheapest, and by how much?

5. A water tank is 3/4 full. After 33 litres are used, it is 20% full.
   How many litres does the tank hold when it is completely full?

6. Use division to write 7/11 as a decimal. What do you notice?
   Write 7/11 as a percentage to 1 decimal place.

7. Mrs Patel has £360. She gives 1/3 of it to her son and then 25% of what is left to her daughter.
   What percentage of the £360 does she keep?

8. Which fraction with a denominator of 8 lies between 0.6 and 70%?

9. Kai says, “1/8 = 0.8 because they both have an 8.” Explain Kai’s mistake.
   Write 1/8 correctly as a decimal and as a percentage.

10. A school has 600 pupils. 45% of the pupils are boys. 2/11 of the girls wear glasses.
    a) How many girls wear glasses? b) What percentage of all the pupils are girls who wear glasses?