

Fractions, decimals and percentages

Revision questions: answers

Simplifying fractions

1 $\frac{18}{24} = \frac{3}{4}$

2 (a) $\frac{3}{4}$ (b) $\frac{2}{3}$ (c) $\frac{7}{10}$

Ordering fractions

3 (a) $\frac{7}{12}$, $\frac{5}{8}$, $\frac{3}{4}$ (b) $\frac{13}{20}$, $\frac{7}{10}$, $\frac{3}{4}$, $\frac{4}{5}$

4 Sam, because $\frac{2}{5} = \frac{16}{40}$ is more than $\frac{3}{8} = \frac{15}{40}$

Mixed numbers and improper fractions

5 (a) $2\frac{3}{4}$ (b) $\frac{11}{4}$

6 (a) $\frac{17}{3}$ (b) $5\frac{1}{6}$

Adding and subtracting fractions

7 (a) $\frac{8}{15}$ (b) $\frac{13}{28}$ (c) $\frac{29}{24} = 1\frac{5}{24}$

8 $\frac{7}{20}$

One number as a percentage of another

9 (a) 24% (b) 45% (c) 17.5%

10 Priya (85%, compared with Leo's 82%)

Percentages without a calculator

11 (a) 47 (b) 43 (c) 6.5 (d) 54

12 £36

Converting between fractions, decimals and percentages

13 $\frac{9}{25}$, 0.36, 36%

14 $\frac{3}{5} = 0.6 = 60\%$
 $\frac{9}{20} = 0.45 = 45\%$
 $\frac{1}{25} = 0.04 = 4\%$

Ordering fractions, decimals and percentages

15 (a) $\frac{3}{8}$, 0.4, 41% (b) 0.3, 33%, $\frac{1}{3}$

16 Shop C ($0.35 = 35\%$, $\frac{1}{3} \approx 33.3\%$)

Fractions of amounts

17 36

18 (a) 24 (b) 392

19 480

Percentages of amounts

20 (a) 49 (b) 8

21 (a) 19.55 (b) £108

Percentage change

22 (a) 24% increase (b) 15% decrease

23 25%

Simple interest

24 £510, £520, £530, £540

25 5 years

Calculating with mixed numbers and negatives

26 (a) $3\frac{11}{12}$ (b) $2\frac{7}{10}$ (c) 4

27 (a) 3 (b) $-\frac{3}{5}$ (c) 2

Word problems with mixed numbers

28 $2\frac{7}{12}$ m

29 8 glasses

30 $21\frac{2}{3}$ m²

Recurring decimals to fractions

31 $10n = 4.444\dots$, $9n = 4$, $n = \frac{4}{9}$

32 (a) $\frac{4}{11}$ (b) $\frac{5}{6}$

Percentage increase and decrease with multipliers

33 (a) 1.08 (b) 0.7 (c) 1.025

34 (a) £86.40 (b) 1100

Finding the original amount

35 £80

36 £70

37 £45

Problem solving

38 Shop B, by 15p (Shop A £60, Shop B £59.85)

39 The 30% was taken off the original price, not off £280. $280 \div 0.7 = £400$

40 For example $\frac{13}{20} = 0.65$, $\frac{31}{50} = 0.62$ and $\frac{2}{3} = 0.\dot{6}$, which are all between $\frac{3}{5} = 0.6$ and $\frac{7}{10} = 0.7$