

Decimal place value

0.93.4

- 1 Write the value of each red digit.

a. 0.673

(1 mark)

b. 92.085

(1 mark)

c. 22.9

(1 mark)

d. 0.01

(1 mark)

- 2 Calculate:

a. $0.45 \times 10 =$

(1 mark)

b. $0.056 \times 10 =$

(1 mark)

c. $0.76 \times 100 =$

(1 mark)

d. $0.082 \times 100 =$

(1 mark)

e. $0.65 \div 10 =$

(1 mark)

f. $0.23 \div 100 =$

(1 mark)

Comparing decimals

- 1 Circle all the numbers that are greater than 0.7

(1 mark)

0.66 0.71 0.077 0.59 0.9

- 2 Circle all the numbers that are less than 0.7

(1 mark)

0.714 0.69 0.07 0.703 0.56

- 3 Write these numbers in order, starting with the smallest.

(1 mark)

9.13 1.91 9.818 8.214 7.28

- 4 Circle the number that is closest in value to 0.8

(1 mark)

0.82 0.79 0.08 0.88 0.008

Rounding decimals

1 Round these decimals to the nearest tenth.

a. 5.58

(1 mark)

b. 10.59

(1 mark)

c. 63.90

(1 mark)

d. 17.0144

(1 mark)

2 Round these numbers to two decimal places.

a. 1.483

(1 mark)

b. 15.3651

(1 mark)

c. 24.195

(1 mark)

d. 67.341

(1 mark)

Solving problems

1 Sadie has thought of a three-digit decimal number. She says, "When I round it to the nearest whole number it is three but when I round it to the nearest tenth it is 3.4."

What could Sadie's number be?

(1 mark)

2 When Mr Davis rounded the contents of his shopping trolley to the nearest pound it was £56.

What was the least and the most his shopping could have cost him when he got to the till?

(1 mark)



Total 24

Decimal and fraction equivalents

1 Write these fractions as decimals.

a. $\frac{1}{2} =$

(1 mark)

b. $\frac{1}{4} =$

(1 mark)

c. $\frac{3}{4} =$

(1 mark)

d. $\frac{1}{5} =$

(1 mark)

e. $\frac{14}{100} =$

(1 mark)

f. $\frac{7}{20} =$

(1 mark)

g. $\frac{1}{50} =$

(1 mark)

h. $\frac{6}{8} =$

(1 mark)

2 a. $\frac{3}{8}$ as a decimal fraction is 0.375.

Round it to two decimal places.

.....

(1 mark)

b. $\frac{6}{7}$ as a decimal fraction is 0.85714285714286

Round it to three decimal places.

.....

(1 mark)

Ordering fractions and decimals

1 Write these in order of size, starting with the smallest.

a. $\frac{3}{4}$ $\frac{2}{3}$ $\frac{1}{8}$ 0.67

(1 mark)

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b. $\frac{1}{2}$ 0.95 $\frac{1}{7}$ 0.210

(1 mark)

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2 Which is greater, 0.6 or $\frac{5}{6}$? (1 mark)

3 Insert one of the symbols =, < or > to make each statement correct

a. $\frac{1}{3}$ 0.3 (1 mark)

b. $\frac{15}{28}$ 0.5 (1 mark)

c. 0.025 $\frac{25}{100}$ (1 mark)

d. $\frac{6}{8}$ 0.75 (1 mark)

Decimals, fractions and percentages

1 Convert these percentages to decimal fractions.

a. 45.5% = (1 mark)

b. 5% = (1 mark)

c. 75% = (1 mark)

d. 1.5% = (1 mark)

2 Convert these decimal fractions to percentages.

a. 0.65 = (1 mark)

b. 0.01 = (1 mark)

c. 0.025 = (1 mark)

d. 0.905 = (1 mark)

3 Circle the odd one out in each set of fractions, decimals and percentages.

a. $\frac{2}{8}$ $\frac{25}{10}$ $\frac{250}{1000}$ 0.25 (1 mark)

b. 30% 0.333 $\frac{6}{20}$ $\frac{30}{100}$ (1 mark)

c. 0.15 $\frac{30}{200}$ 15% $\frac{15}{50}$ (1 mark)

d. 0.1 1% $\frac{10}{100}$ 10% (1 mark)

Total

 29

Multiplying and dividing fractions

- 1 a. $\frac{1}{8}$ (1 mark)
 b. $\frac{8}{24}$ or $\frac{1}{3}$ (1 mark)
 c. $\frac{1}{6}$ (1 mark)
 d. $\frac{20}{42}$ or $\frac{10}{21}$ (1 mark)
 e. $\frac{4}{14}$ or $\frac{2}{7}$ (1 mark)
 f. $\frac{4}{10}$ or $\frac{2}{5}$ (1 mark)

Solving problems

- 1 28 (1 mark)
 2 16 (1 mark)
 3 Yes. You can work out that between 270 and 288 runners completed the course. (2 marks: award 2 marks for Yes with an explanation that recognises that between 270 and 288 runners completed the course, but only 1 mark for Yes without an explanation)
 4 84 (2 marks: 1 mark for evidence of appropriate working with one arithmetical error allowed, 1 mark for correct answer)
 5 Omar. Freddie gets £6.50 and Omar £7.00 (2 marks: award 2 marks for Omar with an explanation that recognises that Freddie gets £6.50 and Omar gets £7.00; only award 1 mark for Omar with no explanation)

Decimals

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Decimal place value

- 1 a. seven-hundredths (1 mark)
 b. five-thousandths (1 mark)
 c. nine-tenths (1 mark)
 d. one-hundredth (1 mark)
 2 a. 4.5 (1 mark)
 b. 0.56 (1 mark)
 c. 76 (1 mark)
 d. 8.2 (1 mark)
 e. 0.065 (1 mark)
 f. 0.0023 (1 mark)

Comparing decimals

- 1 $\textcircled{0.71}$ $\textcircled{0.9}$ (1 mark)
 2 $\textcircled{0.69}$ $\textcircled{0.07}$ $\textcircled{0.56}$ (1 mark)
 3 1.91 7.28 8.214 9.13 9.818 (1 mark)
 4 $\textcircled{0.79}$ (1 mark)

Rounding decimals

- 1 a. 5.6
 b. 10.6
 c. 63.9
 d. 17.0
 2 a. 1.48
 b. 15.37
 c. 24.20
 d. 67.34

Solving problems

- 1 Accept any three-digit decimal in the range 3.35 to 3.44.
 2 £55.50 and £56.49 (1 mark for both)

Decimal and fraction equivalents pages 34–35

Decimal and fraction equivalents

- 1 a. 0.5 (1 mark)
 b. 0.25 (1 mark)
 c. 0.75 (1 mark)
 d. 0.2 (1 mark)
 e. 0.14 (1 mark)
 f. 0.35 (1 mark)
 g. 0.02 (1 mark)
 h. 0.75 (1 mark)
 2 a. 0.38 (1 mark)
 b. 0.857 (1 mark)

Ordering fractions and decimals

- 1 a. $\frac{1}{8}$ $\frac{2}{3}$ 0.67 $\frac{3}{4}$ (1 mark)
 b. $\frac{1}{7}$ 0.210 $\frac{1}{2}$ 0.95 (1 mark)
 2 $\frac{5}{6}$ (1 mark)
 3 a. > (1 mark)
 b. > (1 mark)
 c. < (1 mark)
 d. = (1 mark)

Decimals, fractions and percentages

- 1 a. 0.455 (1 mark)
 b. 0.05 (1 mark)
 c. 0.75 (1 mark)
 d. 0.015 (1 mark)
 2 a. 65% (1 mark)
 b. 1% (1 mark)
 c. 2.5% (1 mark)
 d. 90.5% (1 mark)
 3 a. $\frac{25}{10}$ (1 mark)
 b. 0.333 (1 mark)