Year 7 fractions, decimals and percentages worksheet

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Name: _____ Date: _____

Question 1

(a) Write 7/20 as a percentage.

(b) Write 45% as a fraction in simplest form.

Answer: _____

Question 2

Write ⅞ as a decimal.

Answer: _____

Question 3

Write each decimal as a percentage: (a) 0.47 (b) 0.6 (c) 1.25

Answer: _____

Question 4

A student scored 36 out of 48 on a maths test. Express the student's score as a percentage of the total, rounded to one decimal place.

Answer: _____

Question 5

Priya's test results were: Maths 17/20, Science 21/25 and English 39/50.

(a) Write each result as a percentage.

(b) In which subject did she do best?

Answer: _____

Question 6

Write each fraction as a decimal.

(a) ¾

(b) ⅖

(c) 7/10

Answer: _____

Question 7

Write each percentage as a decimal: (a) 8% (b) 62.5% (c) 140%

Answer: _____

Question 8

In a class of 32 students, 20 students walk to school. Express the number of students who walk to school as a percentage of the whole class, rounded to one decimal place.

Answer: _____

Question 9

Write 7/25 as a percentage.

Answer: _____

Question 10

Write each decimal as a fraction in simplest form. Write any improper fraction as a mixed number.

(a) 0.35

(b) 0.125

(c) 1.6

Answer: _____

Year 7 fractions, decimals and percentages: answers and worked solutions

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Question 1

Key idea: Percent means out of 100.

1. (a) 7/20 = (7 × 5)/(20 × 5) = 35/100 = 35% 2. (b) 45% = 45/100 = (45 ÷ 5)/(100 ÷ 5) = 9/20

Answer: (a) 35% (b) 9/20

Question 2

Key idea: Divide the numerator by the denominator.

1. 7 ÷ 8 = 0.875

Answer: 0.875

Question 3

Key idea: To change a decimal to a percentage, multiply by 100.

1. (a) 0.47 × 100 = 47% 2. (b) 0.6 × 100 = 60% 3. (c) 1.25 × 100 = 125%

Answer: (a) 47% (b) 60% (c) 125%

Question 4

Key idea: Write the score as a fraction of the total, then multiply by 100 to convert to a percentage.

1. Write as a fraction: 36/48 2. Multiply by 100: 36/48 × 100 3. Simplify the fraction first: 36/48 = 0.75 4. Calculate: 0.75 × 100 = 75

Answer: The student scored 75%.

Question 5

Key idea: To compare scores out of different totals, convert each to a percentage (a fraction out of 100).

1. (a) Maths: 17/20 = (17 × 5)/(100) = 85/100 = 85% 2. (a) Science: 21/25 = (21 × 4)/(100) = 84/100 = 84% 3. (a) English: 39/50 = (39 × 2)/(100) = 78/100 = 78% 4. (b) 85% is the highest, so Maths

Answer: (a) Maths 85%, Science 84%, English 78% (b) Maths

Question 6

Answer: (a) 0.75 (b) 0.4 (c) 0.7

Question 7

Key idea: To change a percentage to a decimal, divide by 100.

1. (a) 8 ÷ 100 = 0.08 2. (b) 62.5 ÷ 100 = 0.625 3. (c) 140 ÷ 100 = 1.4

Answer: (a) 0.08 (b) 0.625 (c) 1.4

Question 8

Key idea: Write the part as a fraction of the total, then multiply by 100.

1. Write as a fraction: 20/32 2. Multiply by 100: 20/32 × 100 3. Divide: 20 ÷ 32 = 0.625 4. Multiply by 100: 0.625 × 100 = 62.5

Answer: 62.5% of the class walk to school.

Question 9

Key idea: Make the denominator 100.

1. 7/25 = 28/100 2. 28/100 = 28%

Answer: 28%

Question 10

Answer: (a) 7/20 (b) ⅛ (c) 1⅗