



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Fractions, Decimals & Percentages · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Fractions, Decimals & Percentages

Total marks available: 80

● Fractions, Decimals & Percentages

✓12 sweets

Q1 · ● Developing · 2 marks

METHOD

$$\frac{3}{4} \text{ of } 16 = (16 \div 4) \times 3 = 4 \times 3 = 12$$

✓0.5

Q2 · ● Developing · 2 marks

METHOD

$$1/2 = 1 \div 2 = 0.5$$

✓0.88

Q3 · ● Developing · 2 marks

METHOD

$$22/25 = 22 \div 25 = 0.88$$

✓75%

Q4 · ● Developing · 2 marks

METHOD

$$\frac{3}{4} = 0.75; 0.75 \times 100 = 75\%$$

✓3/50

Q5 · ● Developing · 2 marks

METHOD

$$6\% = 6/100, \text{ which simplifies to } 3/50$$

✓3/5

Q6 · ● Developing · 2 marks

METHOD

$$60\% = 60/100, \text{ which simplifies to } 3/5$$

✓30 km

Q7 · ● Developing · 2 marks

METHOD

$$3/4 \text{ of } 40 = (40 \div 4) \times 3 = 10 \times 3 = 30$$

✓0.8

Q8 · ● Developing · 2 marks

METHOD

$$4/5 = 4 \div 5 = 0.8$$

✓0.25

Q9 · ● Developing · 2 marks

METHOD

$$1/4 = 1 \div 4 = 0.25$$

✓40%

Q10 · ● Developing · 2 marks

METHOD

$$2/5 = 0.4; 0.4 \times 100 = 40\%$$

✓5/12

Q11 · ● Secure · 3 marks

METHOD

Common denominator = 12

$$1/4 = 3/12, 1/6 = 2/12$$

$$3/12 + 2/12 = 5/12$$

✓271.7

Q12 · ● Secure · 3 marks

METHOD

$$30\% \text{ of } 209 = 209 \times 30/100 = 62.7$$

$$\text{New amount} = 209 + 62.7 = 271.7$$

✓ £289

Q13 · ● Secure · 3 marks

METHOD

$$15\% \text{ of } 340 = 340 \times 15/100 = £51$$

$$\text{New amount} = 340 - 51 = £289$$

✓ 22/15

Q14 · ● Secure · 3 marks

METHOD

Common denominator = 30

$$4/6 = 20/30, 4/5 = 24/30$$

$$20/30 + 24/30 = 44/30 = 22/15$$

✓ 11/15

Q15 · ● Secure · 3 marks

METHOD

Common denominator = 15

$$1/3 = 5/15, 2/5 = 6/15$$

$$5/15 + 6/15 = 11/15$$

✓ 11/15

Q16 · ● Secure · 3 marks

METHOD

Common denominator = 30

$$2/5 = 12/30, 2/6 = 10/30$$

$$12/30 + 10/30 = 22/30 = 11/15$$

✓ 301.5

Q17 · ● Secure · 3 marks

METHOD

$$10\% \text{ of } 335 = 335 \times 10/100 = 33.5$$

$$\text{New amount} = 335 - 33.5 = 301.5$$

✓295.1

Q18 · ● Secure · 3 marks

METHOD

$$30\% \text{ of } 227 = 227 \times 30/100 = 68.1$$

$$\text{New amount} = 227 + 68.1 = 295.1$$

✓1/6

Q19 · ● Secure · 3 marks

METHOD

Common denominator = 6

$$1/2 = 3/6, 1/3 = 2/6$$

$$3/6 - 2/6 = 1/6$$

✓£159.60

Q20 · ● Secure · 3 marks

METHOD

$$20\% \text{ of } 133 = 133 \times 20/100 = £26.60$$

$$\text{New amount} = 133 + 26.60 = £159.60$$

✓10/3

Q21 · ● Greater Depth · 3 marks

METHOD

$$5/6 \div 1/4 = 5/6 \times 4/1 = (5 \times 4)/(6 \times 1) = 20/6$$

Simplified: 10/3

✓15/16

Q22 · ● Greater Depth · 3 marks

METHOD

$$5/8 \div 2/3 = 5/8 \times 3/2 = (5 \times 3)/(8 \times 2) = 15/16$$

Simplified: 15/16

✓ 4.9%

Q23 · ● Greater Depth · 3 marks

METHOD

Change = 7

Percentage change = $(\text{change} \div \text{original}) \times 100 = (7 \div 142) \times 100 = 4.9\%$

✓ 21/4

Q24 · ● Greater Depth · 3 marks

METHOD

$3/4 \div 1/7 = 3/4 \times 7/1 = (3 \times 7)/(4 \times 1) = 21/4$

Simplified: 21/4

✓ 18/25

Q25 · ● Greater Depth · 3 marks

METHOD

$2/5 \div 5/9 = 2/5 \times 9/5 = (2 \times 9)/(5 \times 5) = 18/25$

Simplified: 18/25

✓ 20.1%

Q26 · ● Greater Depth · 3 marks

METHOD

Change = 59

Percentage change = $(\text{change} \div \text{original}) \times 100 = (59 \div 294) \times 100 = 20.1\%$

✓ 2/7

Q27 · ● Greater Depth · 3 marks

METHOD

$2/5 \times 5/7 = (2 \times 5)/(5 \times 7) = 10/35$

Simplified: 2/7

✓ 5/12

Q28 · ● Greater Depth · 3 marks

METHOD

$$1/3 \div 4/5 = 1/3 \times 5/4 = (1 \times 5)/(3 \times 4) = 5/12$$

Simplified: 5/12

✓ 25.0%

Q29 · ● Greater Depth · 3 marks

METHOD

Change = 53

$$\text{Percentage change} = (\text{change} \div \text{original}) \times 100 = (53 \div 212) \times 100 = 25.0\%$$

✓ 3/7

Q30 · ● Greater Depth · 3 marks

METHOD

$$1/2 \times 6/7 = (1 \times 6)/(2 \times 7) = 6/14$$

Simplified: 3/7