



11+ Mixed Topic Practice Pack

Test your skills • Challenge yourself • Build confidence

Suitable for GL, Independent Schools, and
Grammar School Preparation

ACUMEN TEACH

FREE 11+ Mixed Topic Practice Pack

20 Questions · Mixed Topics · Mixed Maths Topics Sharpen your number skills. Improve mental calculation. Build confidence for the 11+.

Suggested time: 20 minutes

Total marks: 20

Calculator: Not allowed

Name: _____

Date: _____

Instructions

- Answer all 20 questions.
- Choose one answer for each question: A, B, C or D.
- Work carefully and check your calculations.
- Try to complete the pack within the suggested time.
- Each correct answer earns 1 mark.

This pack covers arithmetic, fractions, decimals, percentages, ratio, measurement, geometry, averages, sequences, money, time, probability and problem-solving.

Section 1 — Practice Questions

20 questions · 1 mark per question

Question 1 — Addition

Calculate:

$$3,487 + 2,956$$

- A. 6,343
- B. 6,443
- C. 6,433
- D. 6,543

Question 2 — Division

Calculate:

$$7,200 \div 24$$

- A. 30
- B. 240
- C. 300
- D. 3,000

Question 3 — Fractions of Amounts

What is $\frac{5}{8}$ of 72?

- A. 40
- B. 42
- C. 45
- D. 48

Question 4 — Decimal Multiplication

Calculate:

$$2.4 \times 0.5$$

- A. 0.12
- B. 1.2
- C. 1.5
- D. 12

Question 5 — Percentages

What is 35% of 160?

- A. 45
- B. 52
- C. 56
- D. 65

Question 6 — Ratio

The ratio of boys to girls in a club is 4:5. There are 36 children altogether.

How many are girls?

- A. 16
- B. 18
- C. 20
- D. 24

Question 7 — Converting Units

Convert 3.6 metres into centimetres.

- A. 36 cm
- B. 360 cm
- C. 3,600 cm
- D. 0.36 cm

Question 8 — Perimeter

A rectangle is 13 cm long and 8 cm wide.

What is its perimeter?

- A. 21 cm
- B. 34 cm
- C. 42 cm
- D. 104 cm

Question 9 — Area of a Triangle

A triangle has a base of 12 cm and a perpendicular height of 7 cm.

What is its area?

- A. 19 cm²
- B. 42 cm²
- C. 84 cm²
- D. 168 cm²

Question 10 — Averages

Four numbers are:

8, 11, 14, 15

What is their mean?

- A. 11
- B. 12
- C. 12.5
- D. 14

Question 11 — Number Sequences

Find the next number in the sequence:

3, 8, 18, 38, ...

- A. 58
- B. 68
- C. 76
- D. 78

Question 12 — Money

A book costs £4.25. Sam buys 3 books and pays with a £20 note.

How much change should Sam receive?

- A. £6.75
- B. £7.25
- C. £7.75
- D. £8.25

Question 13 — Time

A film starts at 14:35 and finishes at 16:10.

How long does the film last?

- A. 1 hour 25 minutes
- B. 1 hour 30 minutes
- C. 1 hour 35 minutes
- D. 1 hour 45 minutes

Question 14 — Adding Fractions

Calculate:

$$\frac{2}{3} + \frac{1}{6}$$

- A. $\frac{3}{9}$
- B. $\frac{3}{6}$
- C. $\frac{5}{6}$
- D. 1

Question 15 — Fractions and Decimals

Which fraction is equivalent to 0.75?

- A. $\frac{1}{4}$
- B. $\frac{2}{3}$
- C. $\frac{3}{4}$
- D. $\frac{4}{5}$

Question 16 — Ratio and Sharing

A collection of 84 sweets is shared between two children in the ratio 2:5.

How many sweets does the child receiving the smaller share get?

- A. 12
- B. 21
- C. 24
- D. 60

Question 17 — Multi-Step Problem

There are 6 boxes, each containing 18 pencils. A teacher gives away 27 pencils.

How many pencils remain?

- A. 81
- B. 91
- C. 99
- D. 108

Question 18 — Probability

A bag contains 3 red counters, 5 blue counters and 2 green counters.

One counter is selected at random.

What is the probability that it is NOT blue?

- A. $\frac{1}{5}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$
- D. $\frac{3}{5}$

Question 19 — Volume

A cuboid measures 5 cm long, 4 cm wide and 3 cm high.

What is its volume?

- A. 12 cm^3
- B. 20 cm^3
- C. 47 cm^3
- D. 60 cm^3

Question 20 — Remainders

A number is divided by 7. The answer is 8 remainder 3.

What was the original number?

- A. 53
- B. 56

- C. 59
- D. 61

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Section 2 — Your Answer Sheet

Write the letter of your chosen answer beside each question.

Question	Answer	Question	Answer
1		11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

My final score: _____ / 20

Time taken: _____ minutes

REFLECT ON YOUR PERFORMANCE

Tick the statement that best describes your experience.

☐ I completed all 20 questions within 15 minutes.

☐ I answered most questions correctly but need more speed.

☐ I worked quickly but made some calculation errors.

Keep your score so you can compare your progress when you complete another practice pack.

STOP — CHECK YOUR ANSWERS ONLY AFTER FINISHING

Have you answered all 20 questions?

Take a moment to check your answer sheet. When you are ready, continue to the worked solutions.

Section 3 — Fully Worked Solutions

Question 1 — Answer B: 6,443

Set out the addition carefully:

$$3,487 + 2,956 = 6,443$$

Remember to carry digits into the next column when a column total is 10 or more.

Question 2 — Answer C: 300

Calculate:

$$7,200 \div 24$$

Since $24 \times 3 = 72$, it follows that:

$$24 \times 300 = 7,200$$

Therefore:

$$7,200 \div 24 = 300$$

Question 3 — Answer C: 45

To find $\frac{5}{8}$ of 72:

First divide by 8:

$$72 \div 8 = 9$$

Then multiply by 5:

$$9 \times 5 = 45$$

Answer: 45

Question 4 — Answer B: 1.2

Multiplying by 0.5 is the same as finding half.

Half of 2.4 is 1.2.

Answer: 1.2

Question 5 — Answer C: 56

Find 10% of 160:

$$160 \div 10 = 16$$

Find 30%:

$$16 \times 3 = 48$$

Find 5%:

$$\text{Half of } 10\% = 8$$

Add them together:

$$48 + 8 = 56$$

Answer: 56

Question 6 — Answer C: 20

The ratio is 4:5.

Total parts:

$$4 + 5 = 9$$

Each part represents:

$$36 \div 9 = 4 \text{ children}$$

Girls represent 5 parts:

$$5 \times 4 = 20$$

Answer: 20 girls

Question 7 — Answer B: 360 cm

1 metre = 100 centimetres.

Therefore:

$$3.6 \times 100 = 360$$

Answer: 360 cm

Question 8 — Answer C: 42 cm

A rectangle has two lengths and two widths.

$$\text{Perimeter} = 13 + 8 + 13 + 8$$

$$= 42 \text{ cm}$$

Alternatively:

$$\text{Perimeter} = 2 \times (13 + 8)$$

$$= 2 \times 21$$

$$= 42 \text{ cm}$$

Question 9 — Answer B: 42 cm²

Area of a triangle = base $\times$ height $\div$ 2

Substitute the values:

$$12 \times 7 \div 2$$

$$= 84 \div 2$$

$$= 42 \text{ cm}^2$$

Remember to divide by 2 when calculating the area of a triangle.

Question 10 — Answer B: 12

To find the mean, add the numbers and divide by how many numbers there are.

$$8 + 11 + 14 + 15 = 48$$

There are 4 numbers.

$$48 \div 4 = 12$$

Answer: 12

Question 11 — Answer D: 78

Look at how the numbers change:

$$3 \times 2 + 2 = 8$$

$$8 \times 2 + 2 = 18$$

$$18 \times 2 + 2 = 38$$

Apply the same rule again:

$$38 \times 2 + 2 = 78$$

Answer: 78

Question 12 — Answer B: £7.25

First find the total cost:

$$£4.25 \times 3 = £12.75$$

Then subtract from £20:

$$£20.00 - £12.75 = £7.25$$

Answer: £7.25

Question 13 — Answer C: 1 hour 35 minutes

From 14:35 to 15:35 is 1 hour.

From 15:35 to 16:10 is 35 minutes.

Total time:

$$1 \text{ hour} + 35 \text{ minutes} = 1 \text{ hour } 35 \text{ minutes}$$

Question 14 — Answer C: 5/6

The denominators must be the same before adding.

Convert $\frac{2}{3}$ into sixths:

$$\frac{2}{3} = \frac{4}{6}$$

Now add:

$$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$$

Answer: $\frac{5}{6}$

Question 15 — Answer C: $\frac{3}{4}$

Write 0.75 as a fraction:

$$0.75 = \frac{75}{100}$$

Simplify by dividing the numerator and denominator by 25:

$$75 \div 25 = 3$$

$$100 \div 25 = 4$$

Therefore:

$$0.75 = \frac{3}{4}$$

Question 16 — Answer C: 24

The ratio is 2:5.

Total parts:

$$2 + 5 = 7$$

Value of one part:

$$84 \div 7 = 12$$

The smaller share is 2 parts:

$$12 \times 2 = 24$$

Answer: 24 sweets

Question 17 — Answer A: 81

First find the total number of pencils:

$$6 \times 18 = 108$$

Then subtract the pencils given away:

$$108 - 27 = 81$$

Answer: 81 pencils

Question 18 — Answer C: $\frac{1}{2}$

First find the total number of counters:

$$3 + 5 + 2 = 10$$

Counters that are not blue:

$$3 \text{ red} + 2 \text{ green} = 5$$

Probability = favourable outcomes $\div$ total outcomes

$$5/10 = 1/2$$

Answer: $1/2$

Question 19 — Answer D: 60 cm^3

Volume of a cuboid = length $\times$ width $\times$ height

$$5 \times 4 \times 3 = 60$$

Answer: 60 cm^3

Remember that volume is measured in cubic units.

Question 20 — Answer C: 59

If a number divided by 7 gives 8 remainder 3, multiply 8 by 7 and add the remainder.

$$8 \times 7 = 56$$

$$56 + 3 = 59$$

Check:

$$59 \div 7 = 8 \text{ remainder } 3$$

Answer: 59

SECTION 4: ANSWER KEY

1. B — 6,443
 2. C — 300
 3. C — 45
 4. B — 1.2
 5. C — 56
 6. C — 20
 7. B — 360 cm
 8. C — 42 cm
 9. B — 42 cm²
 10. B — 12
 11. D — 78
 12. B — £7.25
 13. C — 1 hour 35 minutes
 14. C — 5/6
 15. C — 3/4
 16. C — 24
 17. A — 81
 18. C — 1/2
 19. D — 60 cm³
 20. C — 59
-

SECTION 5: REVIEW YOUR SCORE

18–20 marks: Excellent work. Your mixed-topic skills are strong. Focus on maintaining accuracy under timed conditions.

15–17 marks: Good progress. Review the questions you missed and practise those topics again.

11–14 marks: A solid starting point. Identify your weakest two or three topics and work on them before attempting another timed pack.

0–10 marks: Take your time reviewing the worked solutions. Build confidence with each topic before increasing your speed.

KEY 11+ EXAM TIPS

- Read the full question before calculating.
- Underline important numbers and units.
- For ratio questions, add the ratio parts first.
- For percentage questions, look for useful values such as 10%, 25% and 50%.
- For word problems, work out what the question is asking you to find.
- Check whether your answer is sensible.
- If a question is taking too long, move on and return to it later.

WANT TO BUILD EVEN MORE CONFIDENCE?

Regular, targeted practice can help children improve their accuracy, confidence and problem-solving skills for the 11+.

Explore more learning resources and practice materials from **Acumen Teach:**

<https://www.acumen-teach.co.uk/>

Acumen Teach — helping children practise with purpose and progress with confidence.

Correct answer: B — 125

Calculate $68 + 57$.

Split 57 into 50 and 7.

$$68 + 50 = 118$$

$$118 + 7 = 125$$

Final answer: 125

Mental maths tip: Add the tens first, then add the remaining units.

Question 2 — Mental Subtraction

Correct answer: C — 114

Calculate $200 - 86$.

First subtract 80:

$$200 - 80 = 120$$

Then subtract 6:

$$120 - 6 = 114$$

Final answer: 114

Mental maths tip: Splitting a number into tens and units can make subtraction easier.

Question 3 — Times Tables

Correct answer: D — 84

Calculate 14×6 .

Split 14 into 10 and 4.

$$10 \times 6 = 60$$

$$4 \times 6 = 24$$

Add the results:

$$60 + 24 = 84$$

Final answer: 84

Mental maths tip: Break a larger multiplication into two easier calculations.

Question 4 — Division Facts

Correct answer: A — 12

Calculate $144 \div 12$.

Think of the related multiplication:

$$12 \times 12 = 144$$

Therefore:

$$144 \div 12 = 12$$

Final answer: 12

Mental maths tip: Knowing your multiplication tables makes division much quicker.

Question 5 — Percentages

Correct answer: B — 24

Find 25% of 96.

25% is the same as one quarter.

Divide 96 by 4:

$$96 \div 4 = 24$$

Final answer: 24

Mental maths tip:

10% means divide by 10.

25% means divide by 4.

50% means divide by 2.

Question 6 — Finding 10%

Correct answer: C — 37

Find 10% of 370.

To find 10%, divide by 10:

$$370 \div 10 = 37$$

Final answer: 37

Mental maths tip: Dividing a number by 10 moves its digits one place to the right relative to the decimal point.

Question 7 — Fractions Of Amounts

Correct answer: A — 39

Find $\frac{3}{4}$ of 52.

First divide by the denominator:

$$52 \div 4 = 13$$

Then multiply by the numerator:

$$13 \times 3 = 39$$

Final answer: 39

Mental maths tip: Divide first, then multiply when finding a fraction of an amount.

Question 8 — Decimal Addition

Correct answer: D — 6.25

Calculate $2.5 + 3.75$.

Rewrite 2.5 as 2.50.

$$2.50 + 3.75 = 6.25$$

Final answer: 6.25

Mental maths tip: You can add decimal numbers more confidently by imagining the decimal places lined up.

Question 9 — Decimal Subtraction

Correct answer: B — 5.75

Calculate $8.4 - 2.65$.

Rewrite 8.4 as 8.40.

$$8.40 - 2.65 = 5.75$$

Final answer: 5.75

Mental maths tip: You can also count upwards from 2.65 to 8.40, but lining up the decimal places is a reliable way to check the result.

Question 10 — Multiplying Decimals

Correct answer: C — 42

Calculate 0.6×70 .

First calculate:

$$6 \times 70 = 420$$

Since 0.6 is one tenth of 6, the answer must be one tenth of 420.

$$420 \div 10 = 42$$

Final answer: 42

Mental maths tip: Use a related whole-number calculation, then adjust the answer to account for the decimal.

Question 11 — Multiplication Strategies

Correct answer: A — 180

Calculate 15×12 .

Split 12 into 10 and 2.

$$15 \times 10 = 150$$

$$15 \times 2 = 30$$

Add the results:

$$150 + 30 = 180$$

Final answer: 180

Mental maths tip: Multiplying by 12 is often easier when you multiply by 10 and then add twice the original number.

Question 12 — Multiplying By 99

Correct answer: D — 693

Calculate 99×7 .

Think of 99 as $100 - 1$.

$$100 \times 7 = 700$$

Subtract one group of 7:

$$700 - 7 = 693$$

Final answer: 693

Mental maths tip: Multiply by 100 and subtract one copy of the number.

Question 13 — Division

Correct answer: B — 45

Calculate $360 \div 8$.

Think of 360 as 36 tens.

$$36 \div 8 = 4.5$$

Therefore:

$$360 \div 8 = 45$$

You can also check using multiplication:

$$45 \times 8 = 360$$

Final answer: 45

Mental maths tip: Use known multiplication facts to check your division.

Question 14 — Fractions Of Amounts

Correct answer: C — 27

Find $\frac{1}{5}$ of 135.

Divide by the denominator:

$$135 \div 5 = 27$$

Final answer: 27

Mental maths tip: To find one fifth of a number, divide it by 5.

Question 15 — Percentage Calculation

Correct answer: A — 70

Find 35% of 200.

First find 10%:

$$200 \div 10 = 20$$

So 30% is:

$$20 \times 3 = 60$$

Next find 5%, which is half of 10%:

$$20 \div 2 = 10$$

Add the two percentages:

$$60 + 10 = 70$$

Final answer: 70

Mental maths tip: Break less familiar percentages into smaller percentages that are easier to calculate.

Question 16 — Dividing Decimals

Correct answer: D — 8

Calculate $4.8 \div 0.6$.

Multiply both numbers by 10 to remove the decimals:

$$4.8 \div 0.6 = 48 \div 6$$

Now calculate:

$$48 \div 6 = 8$$

Final answer: 8

Mental maths tip: Multiplying both numbers by the same amount keeps the division answer unchanged and can make the calculation simpler.

Question 17 — Metric Conversions

Correct answer: B — 240 cm

Convert 2.4 metres into centimetres.

There are 100 centimetres in 1 metre.

Therefore:

$$2.4 \times 100 = 240$$

Final answer: 240 cm

Mental maths tip: Converting metres to centimetres means multiplying by 100.

Question 18 — Time Calculation

Correct answer: C — 45 minutes

The lesson begins at 10:35 am and finishes at 11:20 am.

From 10:35 am to 11:00 am is 25 minutes.

From 11:00 am to 11:20 am is 20 minutes.

Add the intervals:

$$25 + 20 = 45 \text{ minutes}$$

Final answer: 45 minutes

Mental maths tip: Count to the next hour first, then add the remaining minutes.

Question 19 — Money

Correct answer: A — £1.40

Three pens cost £1.20 each.

First calculate the total cost:

$$£1.20 \times 3 = £3.60$$

Subtract this from £5.00:

$$£5.00 - £3.60 = £1.40$$

Final answer: £1.40

Mental maths tip: Calculate the total cost before finding the change.

Question 20 — Mixed Operations

Correct answer: C — 29

Calculate:

$$48 \div 6 + 7 \times 3$$

Complete division and multiplication before addition.

First:

$$48 \div 6 = 8$$

Next:

$$7 \times 3 = 21$$

Finally:

$$8 + 21 = 29$$

Final answer: 29

Mental maths tip: Multiplication and division must be completed before addition and subtraction.

SECTION 4 — QUICK ANSWER KEY

1. B — 125
2. C — 114
3. D — 84
4. A — 12
5. B — 24
6. C — 37
7. A — 39
8. D — 6.25
9. B — 5.75
10. C — 42
11. A — 180
12. D — 693
13. B — 45
14. C — 27
15. A — 70
16. D — 8
17. B — 240 cm
18. C — 45 minutes
19. A — £1.40
20. C — 29

Make Your Next Practice Session Count

Mental maths improves through regular practice. Encourage your child to revisit any questions they found difficult and try the same calculation again using a different mental strategy.

Rather than focusing only on speed, aim to build a combination of accuracy, confidence and efficient methods.

WANT TO DEVELOP YOUR SKILLS FURTHER?

At Acumen Teach, our additional 11+ revision guides and practice resources can help pupils strengthen individual maths topics, develop problem-solving strategies and prepare for a wider range of exam-style questions.