

# Back to School Maths Quiz

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A formative assessment to diagnose  
learning gaps and inform planning  
for the school year

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Year 6

# Back to School Maths Quiz

Name .....

Date ..... Class .....

School ..... Score .....



Please write your answer on the answer line provided. You can use the space provided below the question for working out if you need it.

1.  $830 - 50 =$

Answer: .....

2.  $5500 + 600 =$

Answer: .....

3.  $85,480 + 477 =$



Answer: .....

4.  $175,400 - 146,500 =$



Answer: .....

5.  $7 \times 8 =$

Answer: .....

6.  $117 \times 9 =$



Answer:.....

7. Write down all the factors of 12.

Answer:.....

8.  $6^2 =$

Answer:.....

9. Which of the following numbers are prime? 8, 9, 11, 12, 13

Answer:.....

10.  $576 \div 6 =$



Answer:.....

11. Order the following numbers from smallest to largest:

250,430   200,900   275,985   235,985   270,099

Answer:.....

12. Write down the place value of the orange digit: 7,585,992

Answer:.....

13. Round 6,750,900 to the nearest hundred thousand.

Answer:.....

14.  $236 \times 18 =$



Answer:.....

15.  $1,015 \div 7 =$



Answer:.....

16. Simplify  $\frac{8}{12}$

Answer:.....

17. Write the place value of the red digit: 17.8**9**6

Answer:.....

18.  $185 \times 100 =$

Answer:.....

19.  $\frac{1}{8} + \frac{3}{4} =$

Answer:.....

20. Which is the largest of the following numbers: -17, -10

Answer:.....

21.  $57 \div 100 =$

Answer:.....

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22. A sports shop orders 12 boxes of footballs. Each box contains 7 bags of footballs. Each bag contains 9 footballs. How many footballs does the shop order in total?



Answer:.....

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23. A small milkshake costs £2.50. A large milkshake costs £3.00 Cristina orders 2 small milkshakes and 3 large milkshakes. She pays with a £20 note. How much change does she receive?



Answer:.....

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24. Harry and Viktor completed a spelling test in school. Harry scored  $\frac{21}{25}$ . Victor scored 80%. Who scored the highest? Explain how you know.



Answer:.....

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25. A rollercoaster allows 6 in the carriage each time. How many rides would be needed for 130 children?



Answer:.....

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# Answersheet

**1. Answer: 780**

Focus: Mental subtraction (5C1)

Guidance: Children may have attempted this using a written method but it can be solved mentally using appropriate mental methods.

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**2. Answer: 6100**

Focus: Mental addition (5C1)

Guidance: Children may have attempted this using a written method but it can be solved mentally using appropriate mental methods.

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**3. Answer: 85,957**

Focus: Column addition (5C2)

Guidance: Since the number of digits in each number is different, check children have lined up the calculation correctly using place value. Also check that the children have carried correctly where necessary.

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**4. Answer: 28,900**

Focus: Column subtraction (5C2)

Guidance: Check children have correctly used exchanging methods.

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**5. Answer: 56**

Focus: Multiplication facts (4c6a)

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**6. Answer: 1053**

Focus: Formal method of multiplication (5C7a)

Guidance: Check children have carried correctly.

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**7. Answer: 1, 2, 3, 4, 6, 12**

Focus: Identifying Factors (5C5a)

Guidance: Children must identify all 6 factors. Children may draw factor trees or other diagrams to help. Encourage children to find factors in pairs.

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**8. Answer: 36**

Focus: Recognise and use square numbers (5C5d)

Guidance: Check children are familiar with the notation for squares.

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**9. Answer: 11, 13**

Focus: Prime numbers (6C5)

Guidance: Children need to identify both prime numbers to be correct.

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**10. Answer: 96**

Focus: Formal method of short division (5C7b)

Guidance: Check children are using an appropriate method for short division and using carrying methods correctly.

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**11. Answer: 200,900   235,985   250,430   270,099   275,985**

Focus: Ordering numbers up to 10,000,000 (6N2)

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**12. Answer: 500,000 or 5 hundred thousands etc.**

Focus: Place value of digits (6N3)

Guidance: Check that the children have been precise and not just written 'hundred thousands' or '5'.

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**13. Answer: 6,800,000**

Focus: Rounding whole numbers (6N4)

Guidance: Check children have identified the ten thousands digit as the determining number and applied the rounding rule to round up. Some children may apply the rounding rule correctly but replace the rest of the digits incorrectly.

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**14. Answer: 4,248.**

Focus: Formal method of long multiplication (6C7a)

Guidance: Check children have used an appropriate method for long multiplication. When the traditional column method is used, check children have added a zero at the beginning of the step. Also ensure children have added the parts together to obtain the final answer.

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**15. Answer: 145**

Focus: Formal written method of division up to 4 digits (5C7b)

Guidance: Check children are using an appropriate method for short division and using carrying methods correctly.

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**16. Answer:  $\frac{1}{3}$**

Focus: Simplifying fractions (6F2).

Guidance: Check that children have simplified to the simplest form.

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**17. Answer: 0.09**

Focus: Place value of decimals (6F9a)

Guidance: Ensure children have been precise and not just written 'hundredths' or '9'.

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**18. Answer: 18,500**

Focus: Multiplying by 10,100 and 1000 (5C6b)

Guidance: Check that children have used place value to multiply correctly and added two zeroes.

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**19. Answer:  $\frac{7}{8}$**

Focus: Adding fractions with denominators that are multiples of the same number (5F4)

Guidance: Check that children converted the second fraction to  $\frac{6}{8}$  then added the fractions. Check that children then added the numerators but kept the denominators the same.

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**20. Answer: -10**

Focus: Negative Numbers (5N5)

Guidance: Children may have misconceptions that -17 is larger since 17 is larger than 10.

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**21. Answer: 0.57**

Focus: Multiplying by 10,100 and 1000 (5C6b)

Guidance: Ensure children have a good understanding of place value and have moved each digit two places in the place value columns.

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**22. Answer:  $12 \times 7 = 84$ . Therefore,  $84 \times 9 = 756$  footballs**

Focus: Multi-step word problems (6C8)

Guidance: Check children read the question carefully to understand that multiplication is required.

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**23. Answer: Expect to see this series of calculations.  $\pounds 2.50 \times 2 = \pounds 5$ ,  $\pounds 3 \times 3 = \pounds 9$   $\pounds 5 + \pounds 9 = \pounds 14$ ,  $\pounds 20 - \pounds 14 = \pounds 6$**

Focus: Multi-step word problems (6C8)

Guidance: This worded problem involves addition, subtraction and multiplication. Check to see if children understood the operation required in each step.

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**24. Answer: Harry scored highest with 84%**

Focus: Fraction, decimal, and percentage equivalence in context (6F11)

Guidance: In order to explain their answer, children must show that  $21/25$  is equivalent to 84% or 80% is equivalent to  $20/25$ .

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**25. Answer:  $130 \div 6 = 21$  and  $2/3$ . So 22 rides are needed.**

Focus: Problems which require answers to be rounded (6F10)

Guidance: This question assesses children's division skills and also their ability to identify rounding is required. To correctly ascertain that 22 rides are needed for all 130 children to use the rollercoaster, careful thought is required.

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