

WA1 Practice Paper

Whole numbers, factors, multiples and fractions

30 marks | Suggested time: 45 minutes

Name: Class: Date:

Answer all questions. Show your working for Sections B and C. Calculators are not allowed. Give fractions in their simplest form unless stated otherwise.

School WA topic coverage may differ. These are original practice questions. Worked solutions follow the question paper.

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Section A: Multiple Choice (6 marks)

Choose one option and write its number in the answer space.

1. What is the value of the digit 6 in 86 421?

- (1) 6
- (2) 60
- (3) 600
- (4) 6000

Answer: [1]

2. Round 47 658 to the nearest hundred.

- (1) 47 600
- (2) 47 660
- (3) 47 700
- (4) 48 000

Answer: [1]

3. Which number is a common factor of 24 and 36?

- (1) 8
- (2) 9
- (3) 12
- (4) 18

Answer: [1]

4. Which number is the smallest common multiple of 6 and 8?

(1) 12

(2) 14

(3) 24

(4) 48

Answer: [1]

5. Find the missing number: 18 450, 18 700, _____, 19 200.

(1) 18 750

(2) 18 850

(3) 18 950

(4) 19 000

Answer: [1]

6. A strip is divided into 8 equal parts. Three parts are shaded. What fraction is unshaded?

(1) $\frac{3}{8}$

(2) $\frac{5}{8}$

(3) $\frac{3}{5}$

(4) $\frac{5}{3}$

Answer: [1]

Section B: Short Answer (12 marks)

Show your working and give units where needed.

7. Calculate 426×23 .

Answer: [2]

8. Calculate $3257 \div 6$. Give the quotient and remainder.

Answer: [2]

9. Arrange 53 409, 53 940, 53 490 and 53 904 from smallest to greatest.

Answer: [2]

10. Write all the common factors of 18 and 30.

Answer: [2]

11. Write $\frac{17}{4}$ as a mixed number.

Answer: [2]

12. A box holds 48 crayons. $\frac{3}{8}$ of them are blue. How many crayons are blue?

Answer: [2]

Section C: Problem Sums (12 marks)

Show your working and give units where needed.

13. A library had 2480 books. It received 175 boxes containing 12 books each, then donated 635 books. How many books did it have left?

Answer: [4]

14. Three identical notebooks and a pencil case cost \$29 altogether. The pencil case costs \$5 more than one notebook. Find the cost of the pencil case.

Answer: [4]

15. A hall has 18 rows of 24 seats. There are 367 guests. (a) How many seats are empty? [2] (b) Each additional group has 8 people. What is the greatest number of whole groups that can be seated? [2]

Answer: [4]

End of question paper - Total: 30 marks

WA1 Suggested Worked Solutions

Other valid methods are accepted. Mark allocations are suggested for this practice paper.

Question 1 [1 mark]

Option 4. The digit 6 is in the thousands place, so its value is 6000.

Suggested marking: 1 mark for the correct option.

Question 2 [1 mark]

Option 3. The tens digit is 5, so round the hundreds up: 47 700.

Suggested marking: 1 mark for the correct option.

Question 3 [1 mark]

Option 3. Both $24 \div 12 = 2$ and $36 \div 12 = 3$ are whole numbers.

Suggested marking: 1 mark for the correct option.

Question 4 [1 mark]

Option 3. Multiples of 6: 6, 12, 18, 24. Multiples of 8: 8, 16, 24.

Suggested marking: 1 mark for the correct option.

Question 5 [1 mark]

Option 3. Add 250 each time: $18\,700 + 250 = 18\,950$.

Suggested marking: 1 mark for the correct option.

Question 6 [1 mark]

Option 2. There are $8 - 3 = 5$ unshaded parts out of 8 equal parts.

Suggested marking: 1 mark for the correct option.

Question 7 [2 marks]

$426 \times 20 = 8520$; $426 \times 3 = 1278$.

$8520 + 1278 = 9798$.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 8 [2 marks]

$6 \times 542 = 3252$.

$3257 - 3252 = 5$. Quotient = 542, remainder = 5.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 9 [2 marks]

Compare hundreds, then tens.

53 409, 53 490, 53 904, 53 940.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 10 [2 marks]

Factors of 18: 1, 2, 3, 6, 9, 18.

Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30.

Common factors: 1, 2, 3, 6.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 11 [2 marks]

$17 \div 4 = 4$ remainder 1.

Mixed number = $4 \frac{1}{4}$.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 12 [2 marks]

1 eighth = $48 \div 8 = 6$ crayons.

3 eighths = $6 \times 3 = 18$ blue crayons.

Suggested marking: 1 mark for valid working; 1 mark for the correct complete answer.

Question 13 [4 marks]

New books = $175 \times 12 = 2100$.

Books before donation = $2480 + 2100 = 4580$.

Books left = $4580 - 635 = 3945$ books.

Suggested marking: Up to 3 marks for the main calculation or reasoning steps; 1 mark for the correct final answer.

Question 14 [4 marks]

Remove the extra \$5: $\$29 - \$5 = \$24$.

This is the cost of 4 notebook-sized units.

One notebook costs $\$24 \div 4 = \6 .

Pencil case costs $\$6 + \$5 = \$11$.

Suggested marking: Up to 3 marks for the main calculation or reasoning steps; 1 mark for the correct final answer.

Question 15 [4 marks]

(a) Total seats = $18 \times 24 = 432$.

Empty seats = $432 - 367 = 65$.

(b) $65 \div 8 = 8$ remainder 1.

At most 8 whole groups can be seated.

Suggested marking: Parts (a) and (b): 1 method mark and 1 answer mark each.