

IGCSE Maths 4MA1 Number Practice Exam

Pearson Edexcel International GCSE Mathematics A (4MA1), Higher tier · 15 questions · 50 marks

Name _____

Date _____

Score / 50

- Answer every question. Show your working: most marks are for method.
- Calculator allowed.
- Topics: Recurring Decimals to Fractions; Surds; Converting Units of Length, Area, Volume and Capacity; Applying Number; Ratio 1; Highest Common Factor; Prime Factors; Fractions 1; Fractions 2; Rounding Numbers and Using a Calculator; Decimals; Standard Form 1.
- The mark scheme is a separate free PDF: [igcsemathrevision.com/igcse-frontend/downloads/practice-exams/4ma1/igcse-maths-4ma1-number-practice-exam-mark-scheme.pdf](https://www.igcsemathrevision.com/igcse-frontend/downloads/practice-exams/4ma1/igcse-maths-4ma1-number-practice-exam-mark-scheme.pdf)

1. Write $0.\dot{4}$ as a fraction. [1]
|
2. Rationalise the denominator and simplify fully $\frac{12}{\sqrt{6}}$. [2]
|
3. Use algebra to show that the recurring decimal $0.\dot{9}$ is exactly equal to 1. [2]
|
4. Convert 0.08 m^3 into cm^3 . [2]
|
5. Washing liquid is sold in three sizes: 1.5 litres for £4.20, 2 litres for £5.40 and 3.5 litres for £9.66. Which size is the best value for money? Show your working. [3]
|
6. Amy, Ben and Cara share some money in the ratio 2 : 3 : 7. Cara receives £150 more than Amy and Ben receive together. Work out the total amount of money shared. [3]
|



7. A hotel in Stockholm costs 2 450 kronor per night. The exchange rates are £1 = €1.17 and €1 = 11.4 kronor. Work out the cost, in pounds, of staying 3 nights at the hotel. Give your answer to the nearest penny. [3]
8. A rectangular floor measures 4.8 m by 3.6 m. It is covered exactly with square tiles of side 40 cm. How many tiles are needed? [3]
9. $A = 2^3 \times 3^2 \times 5$ and $B = 2^2 \times 3^4 \times 7$. [4]
- (a) Find the highest common factor of A and B , giving your answer as a product of powers of prime factors. [1]
- (b) Find the lowest common multiple of A and B . [2]
- (c) Find the smallest positive integer n such that An is a square number. [1]
10. (a) Write 1764 as a product of its prime factors. [2]
- (b) Hence find $\sqrt{1764}$. [1]
- (c) Find the smallest positive integer k such that $1764k$ is a cube number. [1]
11. (a) Show that $\frac{1}{4} - \frac{1}{5} = \frac{1}{20}$. [1]
- (b) Hence, or otherwise, find the exact value of $\frac{1}{20} + \frac{1}{30} + \frac{1}{42} + \frac{1}{56}$. Show your working clearly and give your answer as a fraction in its simplest form. [3]
12. A rectangle has area $8\frac{3}{4}$ m² and length $3\frac{1}{3}$ m. [4]
- Show that the perimeter of the rectangle is $11\frac{11}{12}$ m. Show your working clearly.



13. (a) By rounding each number to 1 significant figure, estimate the value of $\frac{48.7 \times 0.0263}{0.215^2}$. [2] [5]
(b) Use your calculator to work out the value of $\frac{48.7 \times 0.0263}{0.215^2}$, giving your answer correct to 3 significant figures. [2]
(c) Without using your answer to part (b), explain whether your answer to part (a) is an overestimate or an underestimate. [1]
14. Given that $36 \times 145 = 5220$, write down the value of: [5]
(a) 3.6×1.45 [1]
(b) $5220 \div 3.6$ [1]
(c) $52.2 \div 0.0145$ [1]
(d) Explain why $\frac{7}{40}$ can be written as a terminating decimal but $\frac{7}{30}$ cannot. [2]
15. (a) Write 0.000 47 in standard form. [1] [5]
(b) Write these numbers in order of size, starting with the smallest: 3.2×10^{-3} , 0.031, 31×10^{-4} , 0.3×10^{-2} . [2]
(c) $a = 4 \times 10^{2n}$ and $b = 5 \times 10^n$, where n is an integer. Write ab in standard form, giving your answer in terms of n . [2]

End of exam · More free exams: [igcsemathrevision.com/free-practice-exams](https://www.igcsemathrevision.com/free-practice-exams)

