

Number 3F Assessment

THE ANSWERS

Foundation Level



1 - 26



27 - 29

Clip	Grade	Title of clip	Question(s)	Marked out of	Score	%
78.	3	Product of Primes	1	2	___	___
79.	3	Highest Common Factor (HCF)	2	2	___	___
80.	3	Lowest Common Multiple (LCM)	3 - 4	4	___	___
81.	3	Squares, Cubes and Roots	5	1	___	___
82.	3	Working with Indices	6	1	___	___
83.	3	Standard Form	7 - 9	10	___	___
84.	3	Decimals and Fractions	10 - 11	3	___	___
85.	3	Fractions, Percentages, Decimals	12	2	___	___
86.	3	Percentage of an Amount (Calc.)	27	1	___	___
87.	3	Percentage of an Amount (Non-Calc.)	13	2	___	___
88.	3	Change to a Percentage (Calc.)	28	2	___	___
89.	3	Change to a Percentage (Non-Calc.)	14	2	___	___
90.	3	Rounding to Significant Figures	15 - 16	3	___	___
91.	3	Estimating Answers	17	2	___	___
92.	3	Using Place Value	18	3	___	___
131.	4	Index Notation	19 - 20	6	___	___
132.	4	Introduction to Bounds	21, 29	4	___	___
154.	5	Negative Indices	22 - 23	5	___	___
155.	5	Error Intervals	24	2	___	___
156.	5	Mathematical Reasoning	25 - 26	3	___	___

Out of 60

TOTAL SCORE _____

Final Percentage %

- 1) Express 2100 as the product of its prime factors. $2 \times 2 \times 3 \times 5 \times 5 \times 7$ 2
- 2) Find the highest common factor of 40 and 72. 8 2
- 3) Find the lowest common multiple of 12 and 15. 60 2
- 4) The first buses to Y and Z leave a bus station at 7 am.
Buses to Y leave every 25 minutes.
Buses to Z leave every 20 minutes.
- When will buses to Y and Z next leave at the same time? 8.40 am 2
- 5) Work out the value of $5^2 + \sqrt[3]{27}$ 28 1
- 6) Work out the value of $2^3 + 3^4 + 10^5$ 100089 1
- 7) Write the following in standard form
- a) 471000000 4.71×10^8 2
- b) 0.0000083 8.3×10^{-6} 2
- 8) Write the following as normal numbers
- a) 7.6×10^5 760000 2
- b) 2.3×10^{-4} 0.00023 2
- 9) Work out $(1.8 \times 10^5) \div (9 \times 10^2)$
Give your answer in standard form. 2×10^2 2
- 10) Change 0.64 to a fraction, giving your answer in its simplest form. $\frac{16}{25}$ 1
- 11) Change $\frac{5}{8}$ to a decimal. 0.625 2
- 12) Write these numbers in order of size, smallest to largest. 52% $\frac{4}{5}$ 0.47 $\frac{4}{10}$ 60%
 $\frac{4}{10}$ 0.47 52% 60% $\frac{4}{5}$ 2
- 13) Find 35% of £80 £28 2
- 14) Mandy scored 30 out of 80 in a test.
What was her score as a percentage? 37.5% 2
- 15) $236 \times 148 = 34928$
- a) Round this answer to 2 significant figures. 35000 1
- b) Round this answer to 1 significant figure. 30000 1

16) $64 \div 238 = 0.268907563 \dots$

Round this answer to 2 significant figures. 0.27 1

17) Estimate the answer to $\frac{774 \times 219}{384}$

400 2

18) Using the information that $6.8 \times 24 = 163.2$, write down the value of

a) 680×24 16320 1

b) 68×0.24 16.32 1

c) $16.32 \div 68$ 0.24 1

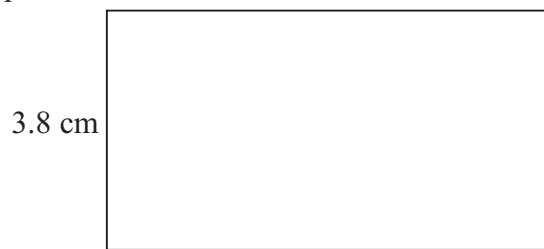
19) Simplify the following, leaving your answers in index form.

a) $3^4 \times 3^5 \times 3 = 3^{10}$ 1 b) $\frac{5^7 \times 5^2}{5 \times 5^4} = 5^4$ 2 c) $(2^4)^3 = 2^{12}$ 2

20) What is the value of 8^0 ? 1 1

21) The length of a rectangle is 15.6 cm correct to 1 decimal place.
The width of a rectangle is 3.8 cm correct to 1 decimal place.

15.6 cm



Calculate the lower bound for the perimeter of the rectangle.

38.6 cm 2

22) Find the value of

a) 6^{-2} $\frac{1}{36}$ 1

b) $3^{-3} \times 10^{-2}$ $\frac{1}{2700}$ 2

23) Write these numbers in order of size, starting with the smallest.

2^{-2} 0.2 2^0 2^{-1} 2^3 -2

-2 0.2 2^{-2} 2^{-1} 2^0 2^3 2

24) A number, x , rounded to 2 significant figures is 260.

Write down the error interval for x . $255 \leq x < 265$ 2

25) Ethan says,

“Squaring a number always results in an even number.”

Write an example to show that he is not correct. $3 \times 3 = 9$ 1

26) A is an even number.

B is an odd number.

Explain why $A + B + 1$ is always an even number.

even + odd = odd
 $A + B = \text{odd}$
odd + 1 = even
 $A + B + 1 = \text{even}$ 2

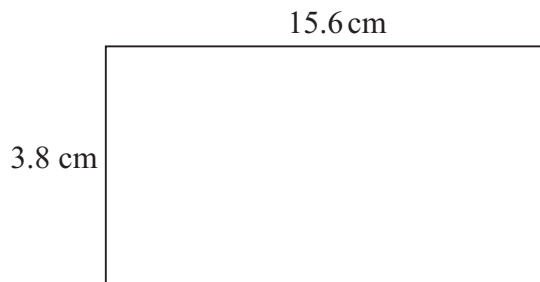
A  can be used for all questions on this page.

27) Work out 72% of £483 £347.76 1

28) Change 46 out of 73 to a percentage.

Give your answer correct to 1 decimal place. 63.0% 2

29) The length of a rectangle is 15.6 cm correct to 1 decimal place.
The width of a rectangle is 3.8 cm correct to 1 decimal place.



Calculate the upper bound for the area of the rectangle. 60.2525 cm² 2