



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Factors, Multiples, Primes & Indices · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Factors, Multiples, Primes & Indices

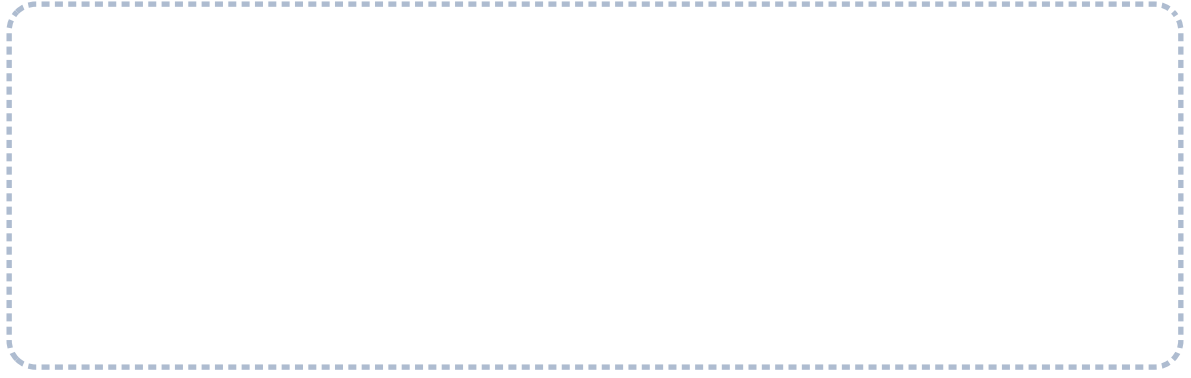
Total marks available: 61

● Factors, Multiples, Primes & Indices

Q1

[2 marks]

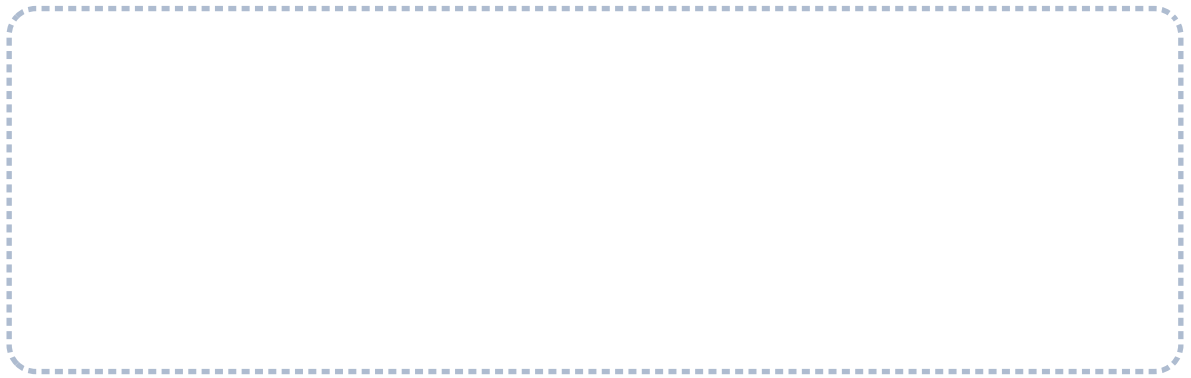
Find the LCM of 24 and 18.



Q2

[2 marks]

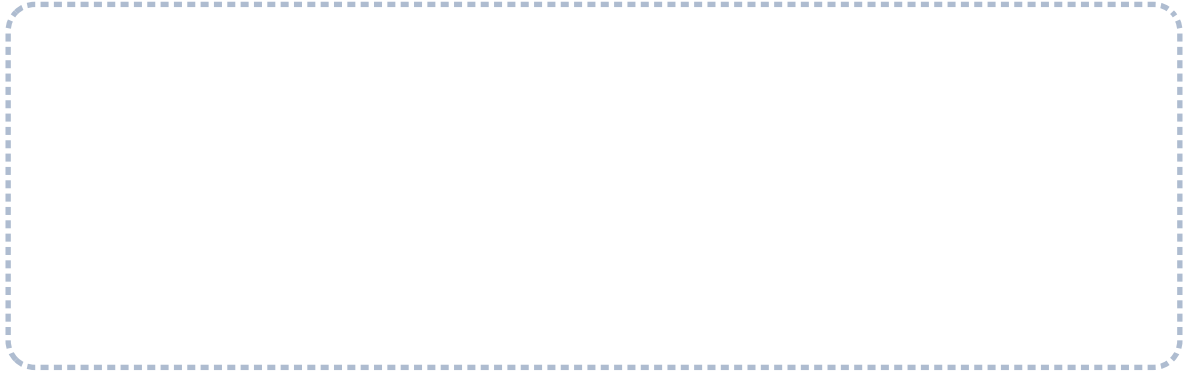
Find the HCF of 8 and 20.



Q3

[2 marks]

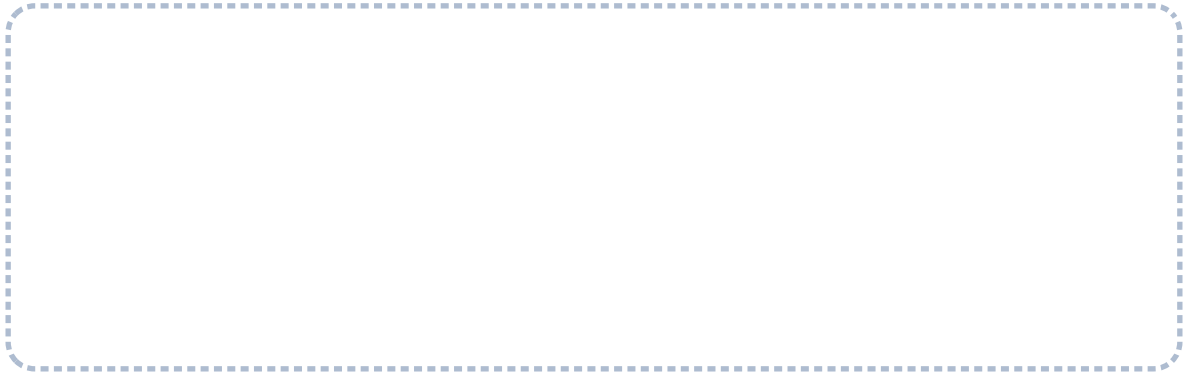
Write 12 as a product of its prime factors.



Q4

[2 marks]

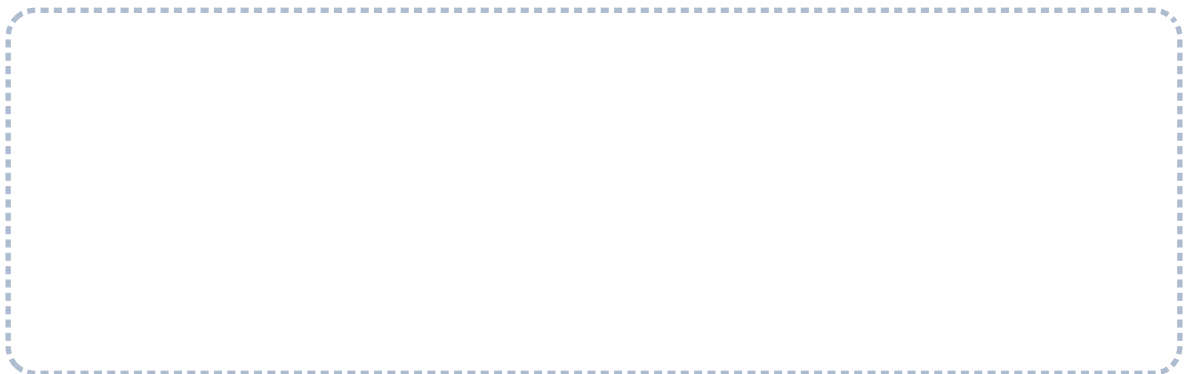
Write 16 as a product of its prime factors.



Q5

[2 marks]

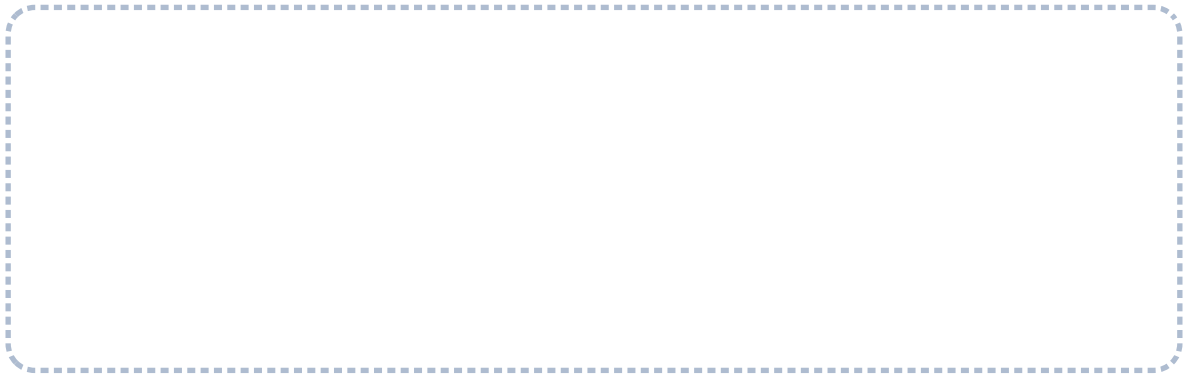
Find the HCF of 42 and 12.



Q6

[2 marks]

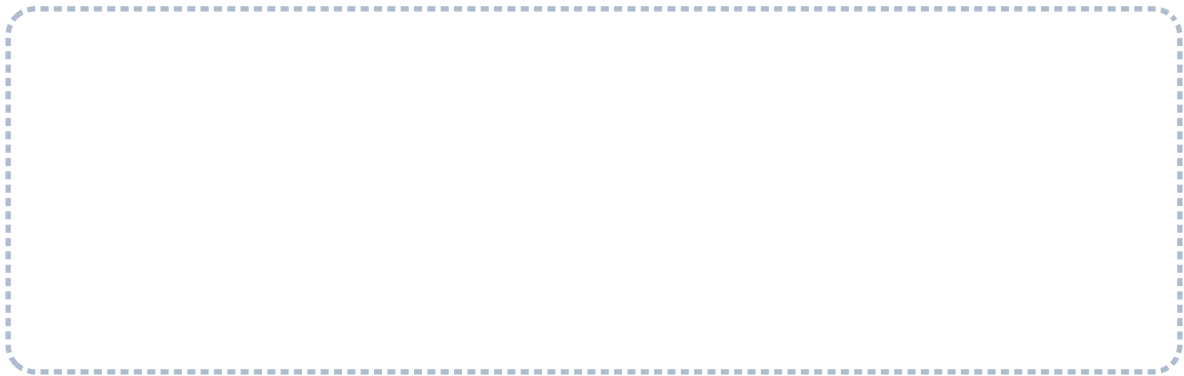
Find the HCF of 25 and 20.



Q7

[2 marks]

Write 42 as a product of its prime factors.



Q8

[2 marks]

Write 18 as a product of its prime factors.



Q9

[2 marks]

Find the LCM of 15 and 18.

Q10

[2 marks]

Write 35 as a product of its prime factors.

Q11

[1 mark]

Calculate 3^2 .

Q12

[2 marks]

Simplify $10^7 \div 10^5$. Give your answer in index form.

Q13

[2 marks]

Simplify $10^5 \div 10^2$. Give your answer in index form.

Q14

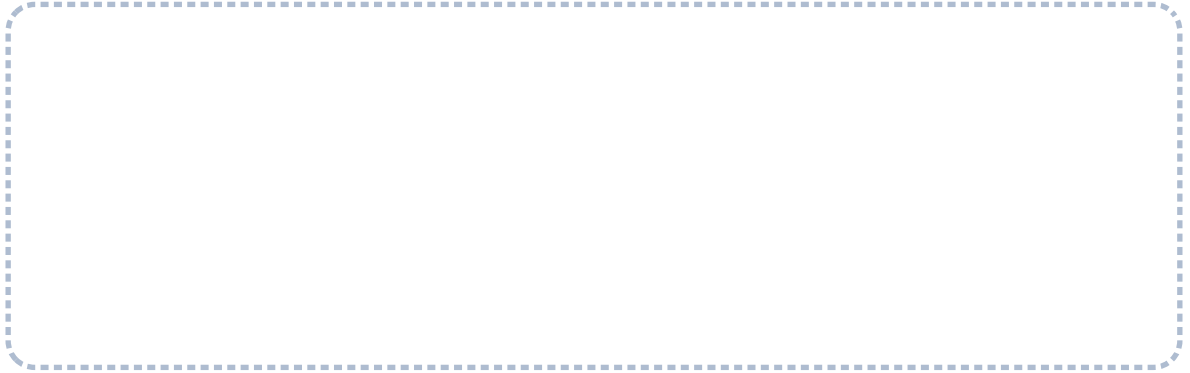
[1 mark]

Calculate the square root of 196.

Q15

[2 marks]

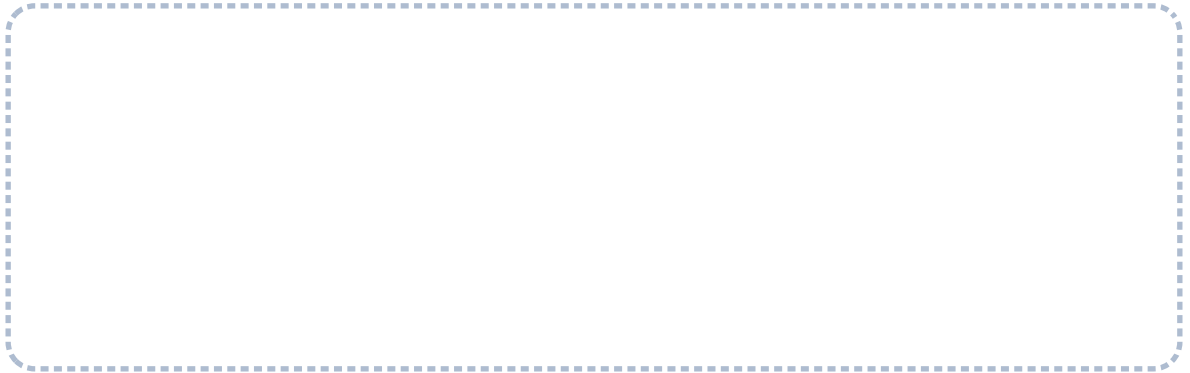
Simplify $2^5 \times 2^1$. Give your answer in index form.



Q16

[1 mark]

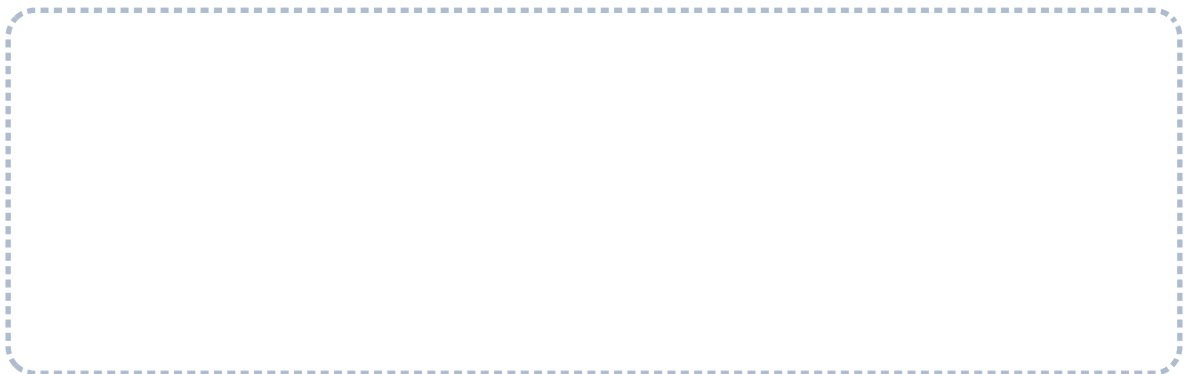
Calculate 3^3 .



Q17

[1 mark]

Calculate the square root of 25.



Q18

[2 marks]

Simplify $5^5 \times 5^2$. Give your answer in index form.

Q19

[1 mark]

Calculate 8^3 .

Q20

[2 marks]

Simplify $3^4 \div 3^3$. Give your answer in index form.

Q21

[2 marks]

Calculate 10^{-2} . Give your answer as a fraction.

Q22

[3 marks]

$28 = 2^2 \times 7$ and $20 = 2^2 \times 5$. Use these prime factorisations to find the LCM of 28 and 20.

Q23

[2 marks]

Calculate 5^{-2} . Give your answer as a fraction.

Q24

[3 marks]

$36 = 2^2 \times 3^2$ and $72 = 2^3 \times 3^2$. Use these prime factorisations to find the LCM of 36 and 72.

Q25

[3 marks]

$20 = 2^2 \times 5$ and $40 = 2^3 \times 5$. Use these prime factorisations to find the LCM of 20 and 40.

Q26

[3 marks]

$24 = 2^3 \times 3$ and $48 = 2^4 \times 3$. Use these prime factorisations to find the HCF of 24 and 48.

Q27

[3 marks]

$18 = 2 \times 3^2$ and $42 = 2 \times 3 \times 7$. Use these prime factorisations to find the LCM of 18 and 42.

Q28

[2 marks]

Calculate 4^{-3} . Give your answer as a fraction.

Q29

[2 marks]

Calculate 10^{-1} . Give your answer as a fraction.

Q30

[3 marks]

$56 = 2^3 \times 7$ and $16 = 2^4$. Use these prime factorisations to find the LCM of 56 and 16.