



ACHIEVE ACADEMY

GCSE Maths — Higher Tier

Ratio · 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.

Ratio

Total marks available: 112

● Ratio

Q1

[3 marks]

$a:b = 3:2$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q2

[3 marks]

$a:b = 2:9$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q3

[3 marks]

$a:b = 4:3$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q4

[3 marks]

$a:b = 4:5$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q5

[4 marks]

$(t + 17):(t + 37) = 3:5$. Find the value of t .

Q6

[3 marks]

$a:b = 2:7$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q7

[3 marks]

$a:b = 6:5$. What fraction of the total amount is a ? Give your answer in its simplest form.

Q8

[4 marks]

$(t + 29):(t + 18) = 4:3$. Find the value of t .

Q9

[4 marks]

$(n + 24):(n + 40) = 4:6$. Find the value of n .

Q10

[4 marks]

$(n + 30):(n + 6) = 5:2$. Find the value of n .

Q11

[3 marks]

An amount of £175 is shared in the ratio 11:14. What percentage of the total does the larger share represent?

Q12

[3 marks]

An amount of £150 is shared in the ratio 7:18. What percentage of the total does the larger share represent?

Q13

[4 marks]

A jar has red and blue marbles in the ratio 3:7. 12 more blue marbles are added, changing the ratio of red to blue to 3:10. Find the original total number of marbles.

Q14

[4 marks]

A jar has red and blue marbles in the ratio 2:3. 4 more blue marbles are added, changing the ratio of red to blue to 4:7. Find the original total number of marbles.

Q15

[4 marks]

A jar has red and blue marbles in the ratio 3:7. 4 more blue marbles are added, changing the ratio of red to blue to 21:53. Find the original total number of marbles.

Q16

[4 marks]

A jar has red and blue marbles in the ratio 4:7. 6 more blue marbles are added, changing the ratio of red to blue to 4:9. Find the original total number of marbles.

Q17

[4 marks]

A jar has red and blue marbles in the ratio 3:7. 4 more blue marbles are added, changing the ratio of red to blue to 2:5. Find the original total number of marbles.

Q18

[4 marks]

A jar has red and blue marbles in the ratio 4:7. 20 more blue marbles are added, changing the ratio of red to blue to 4:17. Find the original total number of marbles.

Q19

[4 marks]

A jar has red and blue marbles in the ratio 2:3. 20 more blue marbles are added, changing the ratio of red to blue to 1:4. Find the original total number of marbles.

Q20

[4 marks]

A jar has red and blue marbles in the ratio 4:5. 16 more blue marbles are added, changing the ratio of red to blue to 12:31. Find the original total number of marbles.

Q21

[4 marks]

Two numbers are in the ratio 2:3. Their difference is 11. Find the two numbers.

Q22

[4 marks]

$a:b:c = 5:1:2$. If $a + c = 70$, find the value of b .

Q23

[4 marks]

Two numbers are in the ratio $6:7$. Their difference is 4. Find the two numbers.

Q24

[4 marks]

Two numbers are in the ratio 7:6. Their difference is 2. Find the two numbers.

Q25

[4 marks]

$a:b:c = 2:3:3$. If $a + c = 25$, find the value of b .

Q26

[4 marks]

Two numbers are in the ratio 4:5. Their difference is 7. Find the two numbers.

Q27

[4 marks]

Two numbers are in the ratio 5:3. Their difference is 16. Find the two numbers.

Q28

[4 marks]

Two numbers are in the ratio 3:2. Their difference is 4. Find the two numbers.

Q29

[4 marks]

Two numbers are in the ratio 7:3. Their difference is 16. Find the two numbers.

Q30

[4 marks]

$a:b:c = 2:6:3$. If $a + c = 10$, find the value of b .