

Name:

Exam Style Questions

Ratio: Equations



Equipment needed: Pen and Calculator

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 271d



Answers and Video Solutions



1. $x : y = 5 : 1$



Circle the correct equation.

$y = 5x$

$x = 5y$

$x = 6y$

$y = 6x$

(1)

2. $c : d = 1 : 2$



Circle the correct equation.

$c = 3d$

$d = 3c$

$c = 2d$

$d = 2c$

(1)

3. $y = 3x$



Write down the ratio $x : y$

.....
(1)

4. x is eight times y



Work out the ratio $y : x$

.....
(1)

5. x is a quarter of y



Work out the ratio $x : y$

.....
(1)

6. In a furniture shop, the ratio of tables to chairs is $1 : 8$



Circle the formula that connects the number of tables, T , and the number of chairs, C , in the furniture shop.

$$C = T + 8$$

$$C = 8T$$

$$T = 8C$$

$$T = C + 8$$

.....
(1)

7. $8x = 5y$



Find the ratio $x : y$

.....
(1)

8. $x : y = 4 : 15$



Work out how many times bigger y is than x

.....
(1)

9. The ratio of $c : d$ is $3 : 4$



Which of the following is correct?
Circle your answer.

$$c \text{ is } \frac{3}{4} \text{ of } d$$

$$c \text{ is } \frac{3}{7} \text{ of } d$$

$$c \text{ is } \frac{4}{7} \text{ of } d$$

$$c \text{ is } \frac{4}{3} \text{ of } d$$

(1)

10. The ratio of $f : g$ is $9 : 2$



Which of the following is correct?
Circle your answer.

$$f \text{ is } \frac{2}{9} \text{ of } g$$

$$f \text{ is } \frac{9}{11} \text{ of } g$$

$$f \text{ is } \frac{2}{11} \text{ of } g$$

$$f \text{ is } \frac{9}{2} \text{ of } g$$

(1)

11. c is 50% more than d



Work out the ratio $c : d$

.....
(2)

12. x is 20% less than y



Work out the ratio $x : y$

.....
(2)

13. y is $2\frac{1}{2}$ times x



Write down the ratio $y : x$

.....
(2)

14. $5w = \frac{1}{4}y$



Find the ratio $w : y$

.....
(2)

15. $8x + 2y = 5y - 2x$



Find the ratio $x : y$

.....
(2)

16. $2c = 5d$



Complete the following statement.

c is% of d

(2)

17. $c : d = 7 : 4$



Find the value of $\frac{2c}{3d}$

.....
(2)

18. $x : y = \frac{2}{5} : \frac{1}{3}$



Write x in terms of y

.....
(2)

19. $\frac{3}{5} : \frac{4}{9} = 1 : y$



Find the value of y

.....
(2)

20. w is a third of $4c$



Find the ratio $c : w$

.....
(2)

21. $x : y = 5 : 6$



$y : z = 10 : 3$

Write z in terms of x

.....
(2)

22. $w = 5y$



$z = 4w$

Write down $y : z$

.....
(2)

23. $x : y = 11 : 2$



$12y = 5z$

Work out $x : z$

.....
(3)

24. $5x = 3y$



$4y = 7z$

where x , y and z are positive numbers.

Find the ratio $x : y : z$

.....
(2)

25. $9x + y = 2x + 5y$



Find the ratio $x : y$

.....
(2)

26. $3x = 4z$



y is five sixths of z

Find the ratio $x : y : z$

.....
(3)

27. $x = 3y$



$$\frac{2y + 3z}{4x + z} = \frac{2}{5}$$

Find the ratio $y : z$

.....
(4)

28. C, D and E are such that



$$C : D = 1 : 5$$

D is $\frac{3}{4}$ of E

Work out the ratio $C : E$

.....
(3)

29. Given that $x^2 : (5x - 24) = 4 : 1$



Find the possible values of x .

.....
(4)

30. Given that $x^2 : (x + 6) = 1 : 2$



Find the possible values of x .

.....
(4)

31. $c : d = 2 : 11$



$$\frac{d - c}{3} = 57$$

Work out the values of c and d .

$c = \dots\dots\dots$ $d = \dots\dots\dots$
(5)

32. Given $(2x - 4) : (x + 1) = (2x + 7) : 6x$



and $x > 0$

Find the value of x .

.....
(5)