

Name: _____

Exam Style Questions

Solving Equations



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 110

Video 113



1. Solve

$$4g = 12$$
$$\div 4 \quad \div 4$$
$$g = 3$$

$$g = \underline{3}$$

(1)

2. Solve

$$x - 3 = 8$$
$$+ 3 \quad + 3$$
$$x = 11$$

$$x = \underline{11}$$

(1)

3. Solve

$$x + 5 = 7$$
$$- 5 \quad - 5$$
$$x = 2$$

$$x = \underline{2}$$

(1)

4. Solve

$$x + 7 = 4$$
$$- 7 \quad - 7$$
$$x = -3$$

$$x = \underline{-3}$$

(1)

5. Solve

$$\frac{x}{4} = 7$$
$$\times 4 \quad \times 4$$
$$x = 28$$

$$x = \underline{28}$$

(1)

6. Solve

$$\frac{x}{2} = 10$$
$$\times 2 \quad \times 2$$
$$x = 20$$

$$x = 20 \dots\dots\dots$$

(1)

7. Solve

$$2w - 1 = 13$$
$$+1 \quad +1$$
$$2w = 14$$
$$\div 2 \quad \div 2$$
$$w = 7$$

$$w = 7 \dots\dots\dots$$

(2)

8. Solve

$$3y + 4 = 22$$
$$-4 \quad -4$$
$$3y = 18$$
$$\div 3 \quad \div 3$$
$$y = 6$$

$$y = 6 \dots\dots\dots$$

(2)

9. Solve

$$\frac{c}{2} + 3 = 10$$
$$-3 \quad -3$$
$$\frac{c}{2} = 7$$
$$\times 2 \quad \times 2$$
$$c = 14$$

$$c = 14 \dots\dots\dots$$

(2)

10. Solve

$$10y - 3 = 24$$

$$\begin{aligned} &+3 \quad +3 \\ 10y &= 27 \\ \div 10 \quad \div 10 \\ y &= 2.7 \end{aligned}$$

$$y = \underline{2.7} \dots\dots\dots (2)$$

11. Solve

$$8w + 20 = 4$$

$$\begin{aligned} &-20 \quad -20 \\ 8w &= -16 \\ \div 8 \quad \div 8 \\ w &= -2 \end{aligned}$$

$$w = \underline{-2} \dots\dots\dots (2)$$

12. Solve

$$12 - y = 5$$

$$\begin{aligned} &+y \quad +y \\ 12 &= 5 + y \\ -5 \quad -5 \\ 7 &= y \end{aligned}$$

$$y = \underline{7} \dots\dots\dots (1)$$

13. Solve

$$18 - 4a = 2$$

$$\begin{aligned} &+4a \quad +4a \\ 18 &= 2 + 4a \\ -2 \quad -2 \\ 16 &= 4a \\ \div 4 \quad \div 4 \\ 4 &= a \end{aligned}$$

$$a = \underline{4} \dots\dots\dots (2)$$

14. Solve

$$2e - 8 = 14$$

$$\begin{aligned} &+8 \quad +8 \\ 2e &= 22 \\ \div 2 \quad \div 2 \\ e &= 11 \end{aligned}$$

$$e = \underline{11} \quad (2)$$

15. Solve

$$\begin{aligned} \frac{w+3}{4} &= 6 \\ \times 4 \quad \times 4 \\ w+3 &= 24 \\ -3 \quad -3 \\ w &= 21 \end{aligned}$$

$$w = \underline{21} \quad (2)$$

16. Solve

$$3(y+4) = 24$$

$$\begin{aligned} 3y+12 &= 24 \\ \downarrow -12 \quad -12 \end{aligned}$$

$$\begin{aligned} 3y &= 12 \\ \div 3 \quad \div 3 \\ y &= 4 \end{aligned}$$

$$\begin{aligned} y &= 4 \\ \swarrow \\ w &= \underline{\quad} \quad (2) \end{aligned}$$

17. Solve

$$5(2y+7) = 20$$

$$\begin{aligned} 10y+35 &= 20 \\ -35 \quad -35 \end{aligned}$$

$$\begin{aligned} 10y &= -15 \\ \div 10 \quad \div 10 \\ y &= -1.5 \end{aligned}$$

$$y = \underline{-1.5} \quad (2)$$

18. Solve $7w + 3 = 5w + 9$

$$\begin{array}{r} -5w \quad -5w \\ 2w + 3 = 9 \\ \quad -3 \quad -3 \\ 2w = 6 \\ \div 2 \quad \div 2 \end{array}$$

$w = \underline{3}$
(2)

19. Solve $7y + 6 = 5(y - 2)$

$$\begin{array}{r} 7y + 6 = 5y - 10 \\ -5y \quad -5y \\ 2y + 6 = -10 \\ \quad -6 \quad -6 \\ 2y = -16 \\ \div 2 \quad \div 2 \\ y = -8 \end{array}$$

$y = \underline{-8}$
(3)

20. Solve $4(2x - 5) = 5x + 4$

$$\begin{array}{r} 8x - 20 = 5x + 4 \\ 3x - 20 = 4 \\ 3x = 24 \\ x = 8 \end{array}$$

$x = \underline{8}$
(3)

21. Solve $2(2x + 1) = 3(x - 4)$

$$\begin{array}{r} 4x + 2 = 3x - 12 \\ x + 2 = -12 \\ x = -14 \end{array}$$

$x = \underline{-14}$
(3)

22. Solve $5(3c - 2) - 7c = 40 - 2c$

$$15c - 10 - 7c = 40 - 2c$$

$$8c - 10 = 40 - 2c$$

$$10c - 10 = 40$$

$$10c = 50$$

$$c = 5$$

$$c = \underline{5} \dots\dots\dots (3)$$

23.

w	w	w	w	20
w	w	x	x	24
w	x	x	y	25
w	x	y	z	30

In the grid above, each row adds up to the number to the right.

Find the values of w, x, y and z.

$$4w = 20$$

$$w = 5$$

$$2w + 2z = 24$$

$$10 + 2z = 24$$

$$2z = 14$$

$$z = 7$$

$$w + x + y + z = 30$$

$$z = 12$$

$$w + 2x + y = 25$$

$$19 + y = 25$$

$$y = 6$$

$$w = \underline{5} \dots\dots\dots$$

$$x = \underline{7} \dots\dots\dots$$

$$y = \underline{6} \dots\dots\dots$$

$$z = \underline{12} \dots\dots\dots (4)$$