

Solving Basic Equations Exam Practice



Filling the gaps

Q1. Find the missing value.

(i) $7 + \boxed{5} = 12$

[1 Mark]

(ii) $15 - \boxed{11} = 4$

[1 Mark]

(iii) $15 - \boxed{-3} = 18$

[1 Mark]

Q2. Fill in the gaps.

(i) $\boxed{19} - 7 = 12$

[1 Mark]

(ii) $15 = 4 + \boxed{11}$

[1 Mark]

(iii) $21 = 18 - \boxed{-3}$

[1 Mark]

Using Letters as Unknowns (Addition and Subtraction)

Q3. Find the value of the unknown variable in each equation.

(i) $17 + x = 25$

$$x = 25 - 17 = 8$$

$$x = \frac{8}{\quad\quad\quad}$$

[1 Mark]

(ii) $37 - y = 21$

$$y = 37 - 21 = 16$$

$$y = \frac{16}{\quad\quad\quad}$$

[1 Mark]

(iii) $50 = 42 - z$

$$z = 42 - 50 = -8$$

$$z = \frac{-8}{\quad\quad\quad}$$

[1 Mark]



Using Letters as Unknowns (Multiplication)

Q4. Find the value of the unknown quantities in each of the following cases.

(i) $6d = 18$

$$d = \frac{18}{6} = 3$$

$$d = \underline{\quad 3 \quad} \quad [1 \text{ Mark}]$$

(ii) $12s = 72$

$$s = \frac{72}{12} = 6$$

$$s = \underline{\quad 6 \quad} \quad [1 \text{ Mark}]$$

(iii) $6q = -24$

$$q = \frac{-24}{6} = -4$$

$$q = \underline{\quad -4 \quad} \quad [1 \text{ Mark}]$$

(iv) $-11r = 121$

$$r = \frac{121}{-11} = -11$$

$$r = \underline{\quad -11 \quad} \quad [1 \text{ Mark}]$$



Using Letters as Unknowns (Division)

Q5. Find all of the unknown values.

(i) $\frac{c}{5} = 25$

$$c = 25 \times 5 = 125$$

$c = \underline{125}$ [1 Mark]

(ii) $\frac{d}{8} = 8$

$$d = 8 \times 8 = 64$$

$d = \underline{64}$ [1 Mark]

(iii) $\frac{e}{-5} = 10$

$$e = 10 \times -5 = -50$$

$c = \underline{-50}$ [1 Mark]

(iv) $\frac{e}{5} = -10$

$$e = -10 \times 5 = -50$$

$c = \underline{-50}$ [1 Mark]



Equations Involving Collecting Like Terms

Q6. Find the value of the unknown in each of the following:

(i) $q + q + q + q = 16$

$$4q = 16$$

$$q = \frac{16}{4} = 4$$

$q = \underline{\quad 4 \quad}$ [2 Marks]

(ii) $3r + 2r - r = 28$

$$4r = 28$$

$$r = \frac{28}{4} = 7$$

$r = \underline{\quad 7 \quad}$ [2 Marks]

(iii) $6q - 8q = 8$

$$-2q = 8$$

$$q = \frac{8}{-2} = -4$$

$q = \underline{\quad -4 \quad}$ [2 Marks]

(iv) $6y - 2y - 8y = 12$

$$-4y = 12$$

$$y = \frac{12}{-4} = -3$$

$y = \underline{\quad -3 \quad}$ [2 Marks]