

EXERCISE 22(B)**1. Solve:**

(i) $2x + 5 = 17$

(ii) $3y - 2 = 1$

(iii) $5p + 4 = 29$

(iv) $4a - 3 = -27$

(v) $2z + 3 = -19$

Solution:

(i) $2x + 5 = 17$

$2x = 17 - 5$

$2x = 12$

$x = 12 / 2$

We get,

$x = 6$

Therefore, the value of $x = 6$

(ii) $3y - 2 = 1$

$3y = 1 + 2$

$3y = 3$

$y = 3 / 3$

We get,

$y = 1$

Therefore, the value of $y = 1$

(iii) $5p + 4 = 29$

$5p = 29 - 4$

$5p = 25$

$p = 25 / 5$

We get,

$p = 5$

Therefore, the value of $p = 5$

(iv) $4a - 3 = -27$

$4a = -27 + 3$

$4a = -24$

$a = -24 / 4$

We get,

$a = -6$

Therefore, the value of $a = -6$

(v) $2z + 3 = -19$

$2z = -19 - 3$

$2z = -22$

$$z = -22 / 2$$

We get,

$$z = -11$$

Therefore, the value of $z = -11$

2. Solve:

(i) $x / 3 - 5 = 2$

(ii) $y / 2 - 3 = 8$

(iii) $z / 7 + 1 = 2 (1 / 2)$

(iv) $a / 2.4 - 5 = 2.4$

(v) $b / 1.6 + 3 = -2.5$

Solution:

(i) $x / 3 - 5 = 2$

$$x / 3 = 2 + 5$$

$$x / 3 = 7$$

$$x = 7 \times 3$$

We get,

$$x = 21$$

Hence, the value of $x = 21$

(ii) $y / 2 - 3 = 8$

$$y / 2 = 8 + 3$$

$$y / 2 = 11$$

$$y = 11 \times 2$$

We get,

$$y = 22$$

Hence, the value of $y = 22$

(iii) $z / 7 + 1 = 2 (1 / 2)$

This can be written as,

$$z / 7 + 1 = 5 / 2$$

$$z / 7 = 5 / 2 - 1$$

$$z / 7 = (5 - 2) / 2$$

We get,

$$z / 7 = 3 / 2$$

$$z = (3 / 2) \times 7$$

On calculating, we get

$$z = 21 / 2$$

$$z = 10 \frac{1}{2}$$

Hence, the value of $z = 10\frac{1}{2}$

(iv) $a / 2.4 - 5 = 2.4$

$$a / 2.4 = 2.4 + 5$$

$$a / 2.4 = 7.4$$

$$a = 7.4 \times 2.4$$

We get,

$$a = 17.76$$

Hence, the value of $a = 17.76$

(v) $b / 1.6 + 3 = - 2.5$

$$b / 1.6 = - 2.5 - 3$$

$$b / 1.6 = -5.5$$

$$b = - 5.5 \times 1.6$$

We get,

$$b = - 8.8$$

Hence, the value of $b = - 8.8$

3. Solve:

(i) $- 8m - 2 = - 10$

(ii) $4x + 2x = 3 + 5$

(iii) $4x - x + 5 = 8$

(iv) $6x + 2 = 2x + 10$

(v) $18 - (2a - 12) = 8a$

Solution:

(i) $- 8m - 2 = - 10$

$$- 8m = - 10 + 2$$

$$- 8m = - 8$$

$$m = - 8 / - 8$$

We get,

$$m = 1$$

Therefore, the value of $m = 1$

(ii) $4x + 2x = 3 + 5$

$$6x = 8$$

$$x = 8 / 6$$

We get,

$$x = 4 / 3$$

$$x = 1\frac{1}{3}$$

Therefore, the value of $x = 1\frac{1}{3}$

$$(iii) 4x - x + 5 = 8$$

$$3x = 8 - 5$$

$$3x = 3$$

$$x = 3 / 3$$

We get,

$$x = 1$$

Therefore, the value of $x = 1$

$$(iv) 6x + 2 = 2x + 10$$

$$6x - 2x = 10 - 2$$

On further calculation, we get

$$4x = 8$$

$$x = 8 / 4$$

$$x = 2$$

Therefore, the value of $x = 2$

$$(v) 18 - (2a - 12) = 8a$$

$$18 - 2a + 12 = 8a$$

$$30 = 8a + 2a$$

$$30 = 10a$$

$$a = 30 / 10$$

We get,

$$a = 3$$

Therefore, the value of $a = 3$