

EXERCISE 22(A)

1. Solve:

(i) $x + 2 = 6$

(ii) $x + 6 = 2$

(iii) $y + 8 = 5$

(iv) $x + 4 = -3$

(v) $y + 2 = -8$

Solution:

(i) $x + 2 = 6$

$$x = 6 - 2$$

We get,

$$x = 4$$

Hence, the value of x for $x + 2$ is 4

(ii) $x + 6 = 2$

$$x = 2 - 6$$

We get,

$$x = -4$$

Hence, the value of x for $x + 6 = 2$ is -4

(iii) $y + 8 = 5$

$$y = 5 - 8$$

We get,

$$y = -3$$

Hence, the value of y for $y + 8 = 5$ is -3

(iv) $x + 4 = -3$

$$x = -3 - 4$$

We get,

$$x = -7$$

Hence, the value of x for $x + 4 = -3$ is -7

(v) $y + 2 = -8$

$$y = -8 - 2$$

We get,

$$y = -10$$

Hence, the value of y for $y + 2 = -8$ is -10

2. Solve:

(i) $x - 3 = 2$

(ii) $m - 2 = -5$

(iii) $b - 5 = 7$

(iv) $a - 2.5 = -4$

(v) $y - 3(1/2) = 6$

Solution:

(i) $x - 3 = 2$

$$x = 2 + 3$$

We get,

$$x = 5$$

Therefore, the value of x for $x - 3 = 2$ is 5

(ii) $m - 2 = -5$

$$m = -5 + 2$$

We get,

$$m = -3$$

Therefore, the value of m for $m - 2 = -5$ is -3

(iii) $b - 5 = 7$

$$b = 7 + 5$$

We get,

$$b = 12$$

Therefore, the value of b for $b - 5 = 7$ is 12

(iv) $a - 2.5 = -4$

$$a = -4 + 2.5$$

We get,

$$a = -1.5$$

Therefore, the value of a for $(a - 2.5) = -4$ is -1.5

(v) $y - 3(1/2) = 6$

This can be written as,

$$y - (7/2) = 6$$

$$y = 6 + (7/2)$$

$$y = (12 + 7)/2$$

$$y = 19/2$$

$$y = 9\frac{1}{2}$$

Therefore, the value of y for $y - 3(1/2) = 6$ is $9\frac{1}{2}$

3. Solve:

(i) $3x = 12$

(ii) $2y = 9$

(iii) $5z = 8.5$

(iv) $2.5m = 7.5$

(v) $3.2p = 16$

Solution:

(i) $3x = 12$

$x = 12 / 3$

We get,

$x = 4$

Hence, the value of x for $3x = 12$ is 4

(ii) $2y = 9$

$y = 9 / 2$

We get,

$y = 4.5$

Hence, the value of y for $2y = 9$ is 4.5

(iii) $5z = 8.5$

$z = 8.5 / 5$

We get.

$z = 1.7$

Hence, the value of z for $z = 8.5 / 5$ is 1.7

(iv) $2.5m = 7.5$

$m = 7.5 / 2.5$

We get,

$m = 3$

Hence, the value of m for $2.5m = 7.5$ is 3

(v) $3.2p = 16$

$p = 16 / 3.2$

$p = (16 \times 10) / 32$

$p = 160 / 32$

$p = 5$

Hence, the value of p for $3.2p = 16$ is 5

4. Solve:

(i) $x / 2 = 5$

(ii) $y / 3 = - 2$

(iii) $a / 5 = - 15$

(iv) $z / 4 = 3 (1 / 4)$

(v) $m / 6 = 2 (1 / 2)$

Solution:

(i) $x / 2 = 5$

$x = 5 \times 2$

We get,

$x = 10$

Hence, the value of x for $x / 2 = 5$ is 10

(ii) $y / 3 = - 2$

$$y = - 2 \times 3$$

We get,

$$y = - 6$$

Hence, the value of y for $y / 3 = - 2$ is $- 6$

(iii) $a / 5 = - 15$

$$a = - 15 \times 5$$

We get,

$$a = - 75$$

Hence, the value of a for $a / 5 = - 15$ is $- 75$

(iv) $z / 4 = 3 (1 / 4)$

This can be written as,

$$z / 4 = 13 / 4$$

$$z = 13 / 4 \times 4$$

We get,

$$z = 13$$

Hence, the value of z for $z / 4 = 3 (1 / 4)$ is 13

(v) $m / 6 = 2 (1 / 2)$

This can be written as,

$$m / 6 = 5 / 2$$

$$m = 5 / 2 \times 6$$

$$m = 5 \times 3$$

We get,

$$m = 15$$

Hence, the value of m for $m / 6 = 2 (1 / 2)$ is 15

5. Solve:

(i) $- 2x = 8$

(ii) $- 3.5y = 14$

(iii) $- 5z = 4$

(iv) $- 5 = a + 3$

(v) $2 = p + 5$

Solution:

(i) $- 2x = 8$

$$x = - 8 / 2$$

We get,

$$x = - 4$$

Therefore, the value of x for $- 2x = 8$ is $- 4$

$$(ii) -3.5y = 14$$

$$y = -14 / 3.5$$

We get,

$$y = -4$$

Therefore, the value of y for $-3.5y = 14$ is -4

$$(iii) -5z = 4$$

$$z = -4 / 5$$

We get,

$$z = -0.8$$

Therefore, the value of z for $-5z = 4$ is -0.8

$$(iv) -5 = a + 3$$

$$-5 - 3 = a$$

On calculating, we get

$$a = -8$$

Therefore, the value of a for $-5 = a + 3$ is -8

$$(v) 2 = p + 5$$

$$2 - 5 = p$$

We get,

$$p = -3$$

Therefore, the value of p for $2 = p + 5$ is -3