Access answers to Maths NCERT Solutions for Class 7 Chapter 4 – Simple Equations Exercise 4.2

1. Give first the step you will use to separate the variable and then solve the equation:

(a) $x - 1 = 0$

Solution:-

We have to add 1 to both the side of given equation,

Then we get,

= x – 1 + 1 = 0 + 1

= x = 1

(b) $x + 1 = 0$

Solution:-

We have to subtract 1 to both the side of given equation,

Then we get,

= x + 1 – 1 = 0 – 1

= x = – 1

(c) $x - 1 = 5$

Solution:-

We have to add 1 to both the side of given equation,

Then we get,

= x – 1 + 1 = 5 + 1

= x = 6

(d) $x + 6 = 2$

Solution:-

We have to subtract 6 to both the side of given equation,

Then we get,

= x + 6 – 6 = 2 – 6

= x = – 4

(e) $y - 4 = -7$

Solution:-

We have to add 4 to both the side of given equation,

Then we get,

= y – 4 + 4 = – 7 + 4

= y = – 3

(f) $y - 4 = 4$

Solution:-

We have to add 4 to both the side of given equation,

Then we get,

= y – 4 + 4 = 4 + 4

= y = 8

(g) *y* + 4 = 4

Solution:-

We have to subtract 4 to both the side of given equation,

Then we get,

= y + 4 – 4 = 4 – 4

= y = 0

(h) *y* + 4 = – 4

Solution:-

We have to subtract 4 to both the side of given equation,

Then we get,

= y + 4 – 4 = – 4 – 4

= y = – 8

2. Give first the step you will use to separate the variable and then solve the equation:

(a) 3l = 42

Solution:-

Now we have to divide both sides of the equation by 3,

Then we get,

= 3l/3 = 42/3

= l = 14

(b) b/2 = 6

Solution:-

Now we have to multiply both sides of the equation by 2,

Then we get,

= b/2 × 2= 6 × 2

= b = 12

(c) p/7 = 4

Solution:-

Now we have to multiply both sides of the equation by 7,

Then we get,

= p/7 × 7= 4 × 7

= p = 28

(d) 4x = 25

Solution:-

Now we have to divide both sides of the equation by 4,

Then we get,

= 4x/4 = 25/4

= x = 25/4

(e) 8y = 36

Solution:-

Now we have to divide both sides of the equation by 8,

Then we get,

= 8y/8 = 36/8

= x = 9/4

(f) (z/3) = (5/4)

Solution:-

Now we have to multiply both sides of the equation by 3,

Then we get,

= (z/3) × 3 = (5/4) × 3

= x = 15/4

(g) (a/5) = (7/15)

Solution:-

Now we have to multiply both sides of the equation by 5,

Then we get,

= (a/5) × 5 = (7/15) × 5

= a = 7/3

(g) 20t = – 10

Solution:-

Now we have to divide both sides of the equation by 20,

Then we get,

= 20t/20 = -10/20

= x = – ½

3. Give the steps you will use to separate the variable and then solve the equation:

(a) 3n – 2 = 46

Solution:-

First we have to add 2 to the both sides of the equation,

Then, we get,

= 3n – 2 + 2 = 46 + 2

= 3n = 48

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3n/3 = 48/3

= n = 16

(b) 5m + 7 = 17

Solution:-

First we have to subtract 7 to the both sides of the equation,

Then, we get,

= 5m + 7 – 7 = 17 – 7

= 5m = 10

Now,

We have to divide both sides of the equation by 5,

Then, we get,

= 5m/5 = 10/5

= m = 2

(c) 20p/3 = 40

Solution:-

First we have to multiply both sides of the equation by 3,

Then, we get,

= (20p/3) × 3 = 40 × 3

= 20p = 120

Now,

We have to divide both sides of the equation by 20,

Then, we get,

= 20p/20 = 120/20

= p = 6

(d) 3p/10 = 6

Solution:-

First we have to multiply both sides of the equation by 10,

Then, we get,

= (3p/10) × 10 = 6 × 10

= 3p = 60

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3p/3 = 60/3

= p = 20

4. Solve the following equations:

(a) 10p = 100

Solution:-

Now,

We have to divide both sides of the equation by 10,

Then, we get,

= 10p/10 = 100/10

= p = 10

(b) 10p + 10 = 100

Solution:-

First we have to subtract 10 to the both sides of the equation,

Then, we get,

= 10p + 10 – 10 = 100 – 10

= 10p = 90

Now,

We have to divide both sides of the equation by 10,

Then, we get,

= 10p/10 = 90/10

= p = 9

(c) p/4 = 5

Solution:-

Now,

We have to multiply both sides of the equation by 4,

Then, we get,

= p/4 × 4 = 5 × 4

= p = 20

(d) – p/3 = 5

Solution:-

Now,

We have to multiply both sides of the equation by – 3,

Then, we get,

= – p/3 × (- 3) = 5 × (- 3)

= p = – 15

(e) 3p/4 = 6

Solution:-

First we have to multiply both sides of the equation by 4,

Then, we get,

= (3p/4) × (4) = 6 × 4

= 3p = 24

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3p/3 = 24/3

= p = 8

(f) 3s = – 9

Solution:-

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3s/3 = -9/3

= s = -3

(g) 3s + 12 = 0

Solution:-

First we have to subtract 12 to the both sides of the equation,

Then, we get,

= 3s + 12 – 12 = 0 – 12

= 3s = -12

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3s/3 = -12/3

= s = – 4

(h) 3s = 0

Solution:-

Now,

We have to divide both sides of the equation by 3,

Then, we get,

= 3s/3 = 0/3

= s = 0

(i) 2q = 6

Solution:-

Now,

We have to divide both sides of the equation by 2,

Then, we get,

= 2q/2 = 6/2

= q = 3

(j) 2q – 6 = 0

Solution:-

First we have to add 6 to the both sides of the equation,

Then, we get,

= 2q – 6 + 6 = 0 + 6

= 2q = 6

Now,

We have to divide both sides of the equation by 2,

Then, we get,

= 2q/2 = 6/2

= q = 3

(k) 2q + 6 = 0

Solution:-

First we have to subtract 6 to the both sides of the equation,

Then, we get,

= 2q + 6 – 6 = 0 – 6

= 2q = – 6

Now,

We have to divide both sides of the equation by 2,

Then, we get,

= 2q/2 = – 6/2

= q = – 3

(l) 2q + 6 = 12

Solution:-

First we have to subtract 6 to the both sides of the equation,

Then, we get,

= 2q + 6 – 6 = 12 – 6

= 2q = 6

Now,

We have to divide both sides of the equation by 2,

Then, we get,

= 2q/2 = 6/2

= q = 3