

13-9-2024
Unit 5

Ex 5.3

Q1 $W = \frac{5}{3}$

$x = \frac{5}{3}$	$x = -\frac{5}{3}$ Ans.
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Q2 $1x + 21 = 6$

$x + 2 = 6$	$x + 2 = -6$
$x = 6 - 2$	$x = -6 - 2$
$x = 4$	$x = -8$ Ans.

Q3 $|5y - 1| = 9$

$5y - 1 = 9$	$5y - 1 = -9$
$5y = 9 + 1$	$5y = -9 + 1$
$5y = 10$	$5y = -8$
$y = \frac{10}{5}$	$y = \frac{-8}{5}$
$y = 2$	$y = -\frac{8}{5}$ Ans.

Q4 $|x + 1| = 2$

$x + 1 = 2$	$x + 1 = -2$
$x = 2 - 1$	$x = -2 - 1$
$x = 1$	$x = -3$ Ans.

Q5 $|6 - 3y| = 0$

$6 - 3y = 0$
 $-3y = -6$
 $3y = 6$
 $y = \frac{6}{3}$
 $y = 2$ Ans.

Q6 $3|z - 2| - 4 = -2$

$3|z - 2| = -2 + 4$

$3|z - 2| = 2$

$|z - 2| = \frac{2}{3}$

$z - 2 = \frac{2}{3}$

$z - 2 = -\frac{2}{3}$

$z = \frac{2}{3} + 2$

$z = -\frac{2}{3} + 2$

$z = \frac{2}{3} + 2$

$z = -\frac{2}{3} + 2$

Q7 $|2x - 1| = 5$

$2x - 1 = 5$

$2x - 1 = -5$

$2x = 5 + 1$

$2x = -5 + 1$

$2x = 6$

$2x = -4$

$x = \frac{6}{2}$

$x = \frac{-4}{2}$

$x = 3$

$x = -2$ Ans.

Q8 $|3x + 2| = 7$

$3x + 2 = 7$

$3x + 2 = -7$

$3x = 7 - 2$

$3x = -7 - 2$

$3x = 5$

$3x = -9$

$x = \frac{5}{3}$

$x = \frac{-9}{3}$

$x = -3$ Ans.

$$Q9 \frac{|4x|}{3} = 12$$

$$|4x| = 12 \times 3$$

$$|4x| = 36$$

$$|4x| = 36$$

$$x = \frac{36}{4}$$

$$x_1$$

$$x = 9$$

$$|4x| = -36$$

$$x = \frac{-36}{4}$$

$$x_1$$

$$x = -9$$

$$Q10 \frac{|5x| + 10}{5} = 5$$

$$|5x| = 5 - 10$$

$$5x = -5$$

$$x = -1$$

$$Q11 \frac{|11 - 2y|}{4} = 3$$

$$|11 - 2y| = 3 \times 4$$

$$|11 - 2y| = 12$$

$$11 - 2y = 12$$

$$-2y = 12 - 11$$

$$-2y = 1$$

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

$$11 - 2y = -12$$

$$-2y = -12 - 11$$

$$-2y = -23$$

$$y = \frac{-23}{-2} \text{ Ans.}$$

$$Q12 \frac{|x+1|}{2} = \frac{|2x-1|}{3}$$

$$\frac{|x+1|}{|2x-1|} = \frac{2}{3}$$

$$\frac{|x+1|}{|2x-1|} = \frac{2}{3}$$

$$3|x+1| = 2|2x-1|$$

$$3x+3 = 4x-2$$

$$3x-4x = -2-3$$

$$-x = -5$$

$$x = 5$$

$$\frac{|x+1|}{|2x-1|} = \frac{-2}{3}$$

$$3|x+1| = -2|2x-1|$$

$$3x+3 = -4x+2$$

$$3x+4x = 2-3$$

$$7x = -1$$

$$x = \frac{-1}{7} \text{ Ans.}$$

$$Q13 \frac{|5x-3|}{1} = \frac{|x+7|}{1}$$

$$5x-3 = x+7$$

$$5x-x = 7+3$$

$$4x = 10$$

$$x = \frac{10}{4}$$

$$x_2$$

$$x = \frac{5}{2}$$

$$5x-3 = -x+7$$

$$5x+x = 7+3$$

$$6x = 10$$

$$x = \frac{10}{6}$$

$$x_2$$

$$x = \frac{5}{3} \text{ Ans.}$$

$$Q14 \frac{|z+3|}{1} - 3 = 5 - \frac{|z+3|}{1}$$

$$|z+3| + |z+3| = 5+3$$

$$|z+3| + |z+3| = 8$$

$$2|z+3| = 8$$

$$|z+3| = \frac{8}{2}$$

$$|z+3| = 4$$

$$|z+3| = 4$$

$$z+3 = 4$$

$$z = 4-3$$

$$z = 1$$

$$z+3 = -4$$

$$z = -4-3$$

$$z = -7 \text{ Ans.}$$