Algebraic Expressions Ex 7.4 Q13

Answer :

First we have to remove the small brackets, or parentheses, ( ), then the curly brackets, { }, and then the square brackets, [ ].
Therefore, we have

$5 + [x - \{2y - (6x + y - 4) + 2x\} - \{x - (y - 2)\}]$
$= 5 + [x - \{2y - 6x - y + 4 + 2x\} - \{x - y + 2\}]$
$= 5 + [x - \{y - 4x + 4\} - \{x - y + 2\}]$
$= 5 + [x - y + 4x - 4 - x + y - 2]$
$= 5 + [4x - 6]$
$= 5 + 4x - 6$
$= 4x - 1$

Algebraic Expressions Ex 7.4 Q14

Answer :

First we have to remove the small brackets, or parentheses, ( ), then the curly brackets, { }, and then the square brackets, [ ].
Therefore, we have

$x^2 - [3x + \{2x - (x^2 - 1)\} + 2]$
$= x^2 - [3x + \{2x - x^2 + 1\} + 2]$
$= x^2 - [3x + 2x - x^2 + 1 + 2]$
$= x^2 - [5x - x^2 + 3]$
$= x^2 - 5x + x^2 - 3$
$= 2x^2 - 5x - 3$

Algebraic Expressions Ex 7.4 Q15

Answer :

First we have to remove the small brackets, or parentheses, ( ), then the curly brackets, { }, and then the square brackets, [ ].
Therefore, we have

$20 - [5xy + 3\{x^2 - (xy - y) - (x - y)\}]$
$= 20 - [5xy + 3\{x^2 - xy + y - x + y\}]$
$= 20 - [5xy + 3\{x^2 - xy + 2y - x\}]$
$= 20 - [5xy + 3x^2 - 3xy + 6y - 3x]$
$= 20 - [2xy + 3x^2 + 6y - 3x]$
$= 20 - 2xy - 3x^2 - 6y + 3x$
$= - 3x^2 - 2xy - 6y + 3x + 20$

Algebraic Expressions Ex 7.4 Q16

Answer :

First we have to remove the small brackets, or parentheses, ( ), then the curly brackets, { }, and then the square brackets, [ ].
Therefore, we have

$85 - [12x - 7(8x - 3) - 2\{10x - 5(2 - 4x)\}]$
$= 85 - [12x - 56x + 21 - 2\{10x - 10 + 20x\}]$
$= 85 - [12x - 56x + 21 - 2\{30x - 10\}]$
$= 85 - [12x - 56x + 21 - 60x + 20]$
$= 85 - [12x - 116x + 41]$
$= 85 - [- 104x + 41]$
$= 85 + 104x - 41$
$= 44 + 104x$

Algebraic Expressions Ex 7.4 Q17

Answer :

First we have to remove the small brackets, or parentheses, ( ), then the curly brackets, { }, and then the square brackets, [ ].
Therefore, we have

$xy - [yz - zx - \{yx - (3y - xz) - (xy - zy)\}]$
$= xy - [yz - zx - \{yx - 3y + xz - xy + zy\}]$
$= xy - [yz - zx - \{- 3y + xz + zy\}]$
$= xy - [yz - zx + 3y - xz - zy]$
$= xy - [- zx + 3y - xz]$
$= xy - [- 2zx + 3y]$
$= xy + 2xz - 3y$

********** END **********