Intermediate Algebra Skill

Solving Linear Equations Involving Nested Symbols of Grouping:

Solve the following linear equations.

1) $4\big(5+2(x-1)\big)=6x+6$

2) $5+2(x-3)=2\big[5-4(x+2)\big]$

3) $3\big[2-4(x-1)\big]=3-4(x+2)$

4) $2\big\{9-3\big[-2x-4\big]\big\}=12x+42$

5) $3\big\{7-2\big[7x-4\big]\big\}=-40x+45$

6) $11+4\big[5x-(2x-1)\big]=12(x+1)$

7) $3\big[2x-(5+4x)\big]=5-7x$

8) $5\big[3x-(2+4x)\big]=9-4x$

9) $4\big[3-2(x+4)\big]-(x+3)=13$

10) $x-\big\{3x-\big[2x-\big(5x-(7x-1)\big)\big]\big\}=x+7$

11) $3x-\big\{5x-\big[7x-\big(4x-(3x+1)\big)\big]\big\}=3x+5$

12) $17-3\big\{5+2\big[x-2\big]\big\}+4\big\{x-3(x+7)\big\}=9\big\{x+3\big[2+3(4-x)\big]\big\}$

13) $23-2\big\{4+3\big[x-1\big]\big\}+5\big\{x-2(x+3)\big\}=7\big\{x-2\big[5-(2x+3)\big]\big\}$

Answers to Solving Linear Equations Involving Nested Symbols of Grouping:

1) -3

2) $-\dfrac{1}{2}$

3) $-\dfrac{23}{8}$

4) $\mathbb{R}$

5) 0

6) $\varnothing$

7) 20

8) -19

9) -4

10) 8

11) 4

12) $\dfrac{224}{29}$

13) $\dfrac{19}{46}$