

### Section 4-3: Solving Equations That Have the Variable in Both Sides

1. 010705a, P.I. A.A.22  
What is the value of  $n$  in the equation  $3n - 8 = 32 - n$ ?  
[A] 6      [B] -6      [C] -10      [D] 10
2. 010807a, P.I. A.A.22  
What is the value of  $p$  in the equation  $8p + 2 = 4p - 10$ ?  
[A] 1      [B] -3      [C] 3      [D] -1
3. fall0732ia, P.I. A.A.22  
Solve for  $g$ :  $3 + 2g = 5g - 9$
4. 060404a, P.I. A.A.22  
If  $3(x - 2) = 2x + 6$ , the value of  $x$  is  
[A] 0      [B] 12      [C] 20      [D] 5
5. 010401a, P.I. A.A.22  
If  $2(x + 3) = x + 10$ , then  $x$  equals  
[A] 5      [B] 4      [C] 14      [D] 7
6. 010601a, P.I. A.A.22  
What is the value of  $x$  in the equation  $5(2x - 7) = 15x - 10$ ?  
[A] -9      [B] -5      [C] 1      [D] 0.6
7. 060702a, P.I. A.A.22  
What is the value of  $x$  in the equation  $6(x - 2) = 36 - 10x$ ?  
[A] 1.5      [B] 6      [C] -6      [D] 3
8. 080731a, P.I. A.A.22  
Solve for  $x$ :  $5(x - 2) = 2(10 + x)$
9. 060602a, P.I. A.A.22  
What is the value of  $x$  in the equation  $13x - 2(x + 4) = 8x + 1$ ?  
[A] 4      [B] 3      [C] 1      [D] 2

[1] D

[2] B

[2] 4, and appropriate work is shown.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] 4, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[3] incorrect procedure.

[4] B

[5] B

[6] B

[7] D

[2] 10, and appropriate work is shown, such as solving the equation or trial and error with at least three trials and appropriate checks.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but no solution is found.

or [1] 10, but no work or fewer than three trials and appropriate checks are shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[8] incorrect procedure.

[9] B