

For A to D, choose Yes or No to indicate whether the equation could be a correct step in the solution of:

$$\frac{1}{2}(x + 6) = -18$$

- A.  $\frac{1}{2}x = -21$        Yes       No
- B.  $\frac{1}{2}x + 6 = -18$        Yes       No
- C.  $x + 6 = -36$        Yes       No
- D.  $\frac{1}{2}x = -15$        Yes       No

**Scoring:**

- 2 points: Selected A and C. (YNYN)  
1 point: Selected A or C only. (YNNN or NNYN)  
0 points: Any other combination.

**Key and Distractor Analysis:**

- A. Key. Distributed  $\frac{1}{2}$  and subtracted 3.  
B. Did not distribute  $\frac{1}{2}$ .  
C. Key. Multiplied both sides of the equation by 2.  
D. Distributed  $\frac{1}{2}$  but then added 3.

**Expressions and Equations****8.EE**

**Analyze and solve linear equations and pairs of simultaneous linear equations.**

7. Solve linear equations in one variable.

- b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.