Indicate which of the following are true or false about the following system:

$$\begin{cases} 3x + 2y = -6 \\ -3x + 2y = 6 \end{cases}$$

A. Graph has no solutions. ◯ True ◯ False

B. These equations have the same *x*-intercept. ◯ True ◯ False

C. The graphs of these two lines are
     perpendicular. ◯ True ◯ False

D. These equations have the same *y*-intercept. ◯ True ◯ False

E. Graph has one solution at $(-2,0)$ ◯ True ◯ False

Scoring:
2 points: Selected B and E only.
1 point: Selected either B or E only.
              Selected either B or E and only one incorrect response.
0 points: Any other combination.

Key and Distractor Analysis:
A. Student might have used the elimination method and been confused when the
remaining equation equals zero.
B. Key. Both have an *x*-intercept of $(-2,0)$.
C. Student might have confused perpendicular lines having opposite slopes only.
D. Student might have made a mistake with a negative sign. One equation has a *y*-intercept
of $(0,-3)$ while the other has a *y*-intercept of $(0,3)$.
E. Key. The only solution that these two linear equations share is $(-2,0)$.

Reasoning with Equations and Inequalities A.REI

Solve systems of equations.

6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing
   on pairs of linear equations in two variables.