Smarter Balanced Mathematics Questions of the Month
October – Middle School

6th Grade:

43047
Look at each expression. Is it equivalent to $36x + 24y$?
Select Yes or No for expressions A – C.

A. $6(6x + 4y)$ ☐ Yes ☐ No
B. $30(6x - 6y)$ ☐ Yes ☐ No
C. $12(x + 2y + 2x)$ ☐ Yes ☐ No

7th Grade:

43053
Look at each expression. Is it equivalent to $\frac{x + 3y}{2}$?
Select Yes or No for expressions A – D.

A. $\frac{4x + 3y}{8}$ ☐ Yes ☐ No
B. $\frac{5}{4} \left( \frac{2x + 6}{5} \right)$ ☐ Yes ☐ No
C. $\frac{1}{2} (x + 3y)$ ☐ Yes ☐ No
D. $\frac{2}{3} \left( \frac{5x}{6} + \frac{9y}{4} - \frac{x}{12} \right)$ ☐ Yes ☐ No
For each linear equation in the table, select whether the equation has no solution, one solution, or infinitely many solutions.

<table>
<thead>
<tr>
<th>Equation</th>
<th>No Solution</th>
<th>One Solution</th>
<th>Infinitely Many Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>$36x + 24 = 12(x + 2 + 2x)$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$x = x + 1$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$-12(x + 2) = -14x + 2$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>