

## Answer Key for Worksheet 1

The rubric below can be used to grade the letter students will write in the Taking Action step of the lesson. If you choose to use this rubric, we recommend you give it to students along with the letter-writing prompt.

70%+	80%+	90%+
<ul style="list-style-type: none"> <li>• 6 complete sentences</li> <li>• Defines income inequality in their own words</li> </ul>	<ul style="list-style-type: none"> <li>• 2 paragraphs</li> <li>• Suggests a solution we can do as a class to address income inequality</li> </ul>	<ul style="list-style-type: none"> <li>• Begins to take action on fixing income inequality</li> </ul>

Solutions:

Men's Equation: ①  $y = 17625W + 5000L$       where  $y = \text{total income}$   
 $W = \text{wins}$   
 $L = \text{losses}$

Women's Equation: ②  $y = 1350W + 100000$

③  $W + L = 22$  ← assuming an average season of 22 games, where Mens and Women's teams work the same amount.

③  $W + L = 22$   
 $-W$   
 $L = 22 - W$

①  $y = 17625W + 5000(22 - W)$   
 $y = 17625W + 110000 - 5000W$   
 $y = 12625W + 110000$

① and ②

$$\begin{array}{r} 1350W + 100000 = 12625W + 110000 \\ -1350W \qquad \qquad -1350W \\ \hline 100000 = 11275W + 110000 \\ -110000 \qquad \qquad -110000 \\ \hline -10000 = 11275W \\ \frac{-10000}{11275} = \frac{11275W}{11275} \\ -0.89 = W \end{array}$$

③  $(-0.89) + L = 22$   
 $L = 22.89$

$W = -0.89$   
 $L = 22.89$

Solution does not exist in reality!