

Part A: Three friends go to a store to rent games and movies. Calvin Rent 3 movies and 2 video games and spent a total of \$25. Samantha rents 2 movies and 1 video game and spends a total of \$14.75.

If the rental fee for each game is the same and the rental fee for each movie is the same, determine how much their friend, Keith, will spend at the rental store to rent 1 movie and 2 video games. Show your work and explain your answer.

Part B: A fourth friend, Beth, rents her movies and video games from a different store. At this store, the rental fee for a movie is the same as the rental fee for a video game.

The total cost of renting 2 movies and 3 video games is the same at both stores. Determine the rental fee that Beth's store charges for each movie or video game. Explain your answer.

## Rubric

PART A	
3	<p>Student response includes the 3 following elements.</p> <ul style="list-style-type: none"> <li>• Correctly models/setup the problem</li> <li>• Correctly determines the costs of renting movies and video games</li> <li>• Determines how much Keith will spend based on the cost of video games and cost of renting movies with a logical progression of explanation or work</li> </ul> <p>Sample Student Response:</p> <p>In order to solve for the rental costs of each movie and video game, I can create a system of equations to model the situation.</p> <p>Let <math>m</math> represent the cost for each movie. Let <math>g</math> represent the cost for each video game.</p> $3m + 2g = 25.00$ $2m + 1g = 14.75$ <p>I can eliminate the variable, <math>g</math>, by multiplying the second equation by 2 and subtracting it from the first equation. I will be able to solve for <math>m</math>.</p> $3m + 2g = 25.00$ $2(2m + 1g = 14.75)$ $\begin{array}{r} 3m + 2g = 25.00 \\ -(4m + 2g = 29.50) \\ \hline -m = -4.50 \\ m = 4.50 \end{array}$ <p>It costs \$4.50 to rent one movie.</p> <p>I can solve for the variable, <math>g</math>, by substituting 4.50 for <math>m</math> into one of the equations.</p> $3m + 2g = 25.00$ $3(4.50) + 2g = 25.00$ $13.50 + 2g = 25.00$ $2g = 11.50$ $g = 5.75$ <p>It costs 5.75 to rent one video game.</p>
	<p>If Keith wants to rent one movie and two video games, it will cost him <math>4.50 + 2(5.75) = 16.00</math>. So, Keith will spend \$16.00 at the rental store.</p>
2	Student response includes 2 of the above elements.
1	Student response includes 1 of the above elements.
0	The response is incorrect or irrelevant.

Part B	
Score	Description
<b>2</b>	<p>Student response includes each of the following 2 elements:</p> <ul style="list-style-type: none"> <li>• Correctly determines the cost of renting 2 movies and 3 video games based on the answer to Part A.</li> <li>• Correctly determines the rental cost of movies and video games at Beth's store.</li> </ul> <p>Sample Student Response:</p> <p>Renting 2 movies and 3 video games from the first store is equal to renting the 2 movies and 3 video games from the second store. Let <math>p</math> be the cost for renting a movie or a video game at the second store.</p> $2m + 3g = 2p + 3p$ $2(4.50) + 3(5.75) = 5p$ $26.25 = 5p$ $p = 5.25$ <p>So, Beth's store charges \$5.25 for each movie or video game rental.</p>
<b>1</b>	Student response includes 1 of the above elements.
<b>0</b>	The response is incorrect or irrelevant.

Points	Genesis Conversion	Points	Genesis Conversion	Points	Genesis Conversion
0	55	0	55	0	55
1	59	1	69	1	69
2	69	2	79	2	89
3	79	3	89	3	100
4	89	4	100		
5	100				