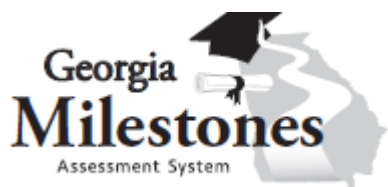


KEY:

POINTS	DESCRIPTION																																																						
4	<p>PART A: Option 1 PART B: Note: 600 per week would be 600×52 for the year = 31,200</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="9" style="text-align: center;">OPTION 1: $f(x) = 31000(1.02)^x$</th> </tr> <tr> <th>0 years</th> <th>1 yrs.</th> <th>2 yrs.</th> <th>3 yrs.</th> <th>4 yrs.</th> <th>5 yrs.</th> <th>6 yrs.</th> <th>7 yrs.</th> <th>8 yrs.</th> </tr> </thead> <tbody> <tr> <td>31,200</td> <td>31,824</td> <td>32,460.48</td> <td>33,109.69</td> <td>33,771.88</td> <td>34,447.32</td> <td>35,136.27</td> <td>35,838.99</td> <td>36,555.77</td> </tr> </tbody> </table> <p>15 per week raise would be $12.50 \times 52 = 650$ raise for the year</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="9" style="text-align: center;">OPTION 2: $f(x) = 31,200 + 650x$</th> </tr> <tr> <th>0 years</th> <th>1 yrs.</th> <th>2 yrs.</th> <th>3 yrs.</th> <th>4 yrs.</th> <th>5 yrs.</th> <th>6 yrs.</th> <th>7 yrs.</th> <th>8 yrs.</th> </tr> </thead> <tbody> <tr> <td>31,200</td> <td>31,850</td> <td>32,500</td> <td>33,150</td> <td>33,800</td> <td>34,450</td> <td>35,100</td> <td>35,750</td> <td>36,400</td> </tr> </tbody> </table> <p>PART C: For the first 5 years option 2 gives you more money but if you plan on saving money in the account for 5 or more years you will make more money with option 1.</p>	OPTION 1: $f(x) = 31000(1.02)^x$									0 years	1 yrs.	2 yrs.	3 yrs.	4 yrs.	5 yrs.	6 yrs.	7 yrs.	8 yrs.	31,200	31,824	32,460.48	33,109.69	33,771.88	34,447.32	35,136.27	35,838.99	36,555.77	OPTION 2: $f(x) = 31,200 + 650x$									0 years	1 yrs.	2 yrs.	3 yrs.	4 yrs.	5 yrs.	6 yrs.	7 yrs.	8 yrs.	31,200	31,850	32,500	33,150	33,800	34,450	35,100	35,750	36,400
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POINTS	DESCRIPTION
4	<p>PART A: (2 points) Bert's: $y = 1 + 3x$ Madeline's: $y = 3 + 2x$</p> <p>PART B: Two Miles (both cost \$7) (Note only need the answer of two miles for full points)</p> <p>PART C: Jackson should call Madeline because it will cost him \$24 where Bert will cost him \$32.5</p>
3	Student will receive 3 points if they get any 3 of the four parts listed above (note that part A counts for 2 points). If part C does not include a comparison of the two different prices then it does not receive points.
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0	No response



Algebra 1
Constructed Response



Katie decided that she wants to build a sandbox for her son to play in. In order to look nice in her backyard she knows that she wants the length of the sandbox to be 4 feet longer than its width.

PART A: Write an expression that expresses the perimeter of the sandbox in terms of x .

PART B: Katie will need to put down a tarp before filling the sandbox with sand. Write an expression that will show the total square footage of tarp she will need for her sandbox in terms of x feet.

PART C: Assuming that Katie wants the width of the sandbox to be 6 feet, how much square footage of tarp will she need?

PART D: Katie plans on making the sandbox 2 feet deep. Assuming the width of the sandbox is 6 feet, how much cubic feet of sand will she need to buy?

PART E: Katie went to the home improvement store and noted the following prices
Wood (for the perimeter of the sandbox): \$0.50 per foot
Tarp: \$0.75 per Square foot
Sand: \$1.25 per cubic foot.

Assuming that the width of the sandbox is still 6 feet, how much will it cost for the full construction of the sandbox?

POINTS	DESCRIPTION
4	<p>PART A: (0.5 pt) $4x + 8$ $[x + x + (x+4) + (x+4)]$</p> <p>PART B: (0.5 pt) $x^2 + 4x$ $[(x)(x+4)]$</p> <p>PART C: (0.5 pt) 60 ft^2 $[(6)^2 + 4(6)]$</p> <p>PART D: (0.5 pt) 120 ft^3 $[60*2]$</p> <p>PART E: (2 pts, 0.5 points for each part) Wood will cost: $4(6) + 8 = 32 * \\$0.50 = \mathbf{\\$16}$ Tarp will cost: $60 * \\$0.75 = \mathbf{\\$45}$ Sand will cost: $120 * \\$1.25 = \mathbf{\\$150}$</p> <p>So total cost will be \$211</p>
	<p>Students can receive individual points on each section</p> <p>SCORING NOTE:</p> <ul style="list-style-type: none"> If an error is made in one of the response elements, future responses based off of that answer should be counted as correct.