

- 27** Juan's parents put \$10,000 into a college education savings account at the rate of 6% compounded annually. The chart below shows the value of the original investment at the end of years 1 and 2.

Investment Value

| End of Year 1 | End of Year 2 | End of Year 3 | End of Year 4 |
|----------------------|----------------------|----------------------|----------------------|
| \$10,600.00 | \$11,236.00 | | ? |

If no further deposits or withdrawals are made, what will the value of the original investment be at the end of year 4? Round your answer to the nearest dollar.

- A. \$11,836.00
- B. \$12,436.00
- C. \$12,584.00
- D. \$12,625.00

Questions 28 and 29 are open-response questions.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations) in your Student Answer Booklet.**
- **If you do the work in your head, explain in writing how you did the work.**

Write your answer to question 28 in the space provided in your Student Answer Booklet.

- 28 The table below shows how C , the circumference of a circle, depends on d , its diameter.

| d units | C units |
|-----------|-----------|
| 1 | 3.14 |
| 2 | 6.28 |
| 3 | 9.42 |
| 4 | 12.56 |
| \vdots | \vdots |
| 10 | 31.4 |

An equation that shows the relationship between the diameter of a circle and its circumference is $C = \pi d$, where 3.14 is used for π .

- What is the circumference of a circle with a diameter of 6 units?
- What is the diameter of a circle with a circumference of 26.69 units?
- On the grid in your Student Answer Booklet, draw a line graph on a coordinate plane showing the relationship between the diameter of a circle and its circumference. Be sure to label the axes.
- Explain how you could use your graph to approximate the circumference of a circle with a diameter of 9 units.