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| 1. ​Complete the table and use the result to estimate the limit.  ​    ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | 1.9 | 1.99 | 1.999 | 2.001 | 2.01 | 2.1 | |  |  |  |  |  |  |  |   ​   |  |  |  | | --- | --- | --- | |  | a. | ​0.482143 | |  | b. | ​0.232143 | |  | c. | ​–0.142857 | |  | d. | ​0.357143 | |  | e. | ​–0.517857 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 2. ​Complete the table and use the result to estimate the limit.  ​    ​   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | 0.9 | 0.99 | 0.999 | 1.001 | 1.01 | 1.1 | |  |  |  |  |  |  |  |   ​   |  |  |  | | --- | --- | --- | |  | a. | ​0.015625 | |  | b. | ​0.145625 | |  | c. | ​–0.114375 | |  | d. | ​0.125625 | |  | e. | ​–0.094375 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 3. Complete the table and use the result to estimate the limit.     |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  | –0.1 | –0.01 | –0.001 | 0.001 | 0.01 | 0.1 | |  |  |  |  |  |  |  |   ​   |  |  |  | | --- | --- | --- | |  | a. | –1 | |  | b. | –0.5 | |  | c. | 0 | |  | d. | 0.5 | |  | e. | 1 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC061 - Estimate a limit from a table of values | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 4. Determine the following limit. (Hint: Use the graph to calculate the limit.)  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 7 | |  | b. | 1 | |  | c. | 6 | |  | d. | 5 | |  | e. | does not exist |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC062 - Estimate the limit of a function from its graph | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 5. Let .  ​  Determine the following limit. (Hint: Use the graph to calculate the limit.)  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 4 | |  | b. | 3 | |  | c. | 2 | |  | d. | 0 | |  | e. | does not exist |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC062 - Estimate the limit of a function from its graph | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 6. Let .  ​  Determine the following limit. (Hint: Use the graph to calculate the limit.)  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 5 | |  | b. | 16 | |  | c. | 1 | |  | d. | 4 | |  | e. | does not exist. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC062 - Estimate the limit of a function from its graph | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 7. Determine the following limit. (Hint: Use the graph to calculate the limit.)  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | –1 | |  | b. | 0 | |  | c. | –2 | |  | d. | 1 | |  | e. | does not exist |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC062 - Estimate the limit of a function from its graph | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 8. A ring has an inner circumference of 9 centimeters. What is the radius of the ring? Round your answer to four decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.7162 centimeter | |  | b. | 2.8648 centimeters | |  | c. | 1.4324 centimeters | |  | d. | 1.6926 centimeters | |  | e. | 8.2070 centimeters |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC063 - Solve a linear equation in applications | | *OTHER:* | Application | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 9. A ring has an inner circumference of 7 centimeters. If the ring's inner circumference can vary between 6 centimeters and 7.5 centimeters, how can the radius vary? Round your answer to five decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | Radius can vary between 3.64756 centimeters and 5.69932 centimeters. | |  | b. | Radius can vary between 1.38198 centimeters and 1.54510 centimeters. | |  | c. | Radius can vary between 0.95493 centimeter and 1.19366 centimeters. | |  | d. | Radius can vary between 1.90986 centimeters and 2.38732 centimeters. | |  | e. | Radius can vary between 0.11408 centimeter and 1.61408 centimeters. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC063 - Solve a linear equation in applications | | *OTHER:* | Application | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 10. A sphere has a volume of 3.32 cubic inches. What is the radius of the sphere? Round your answer to four decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.9254 inch | |  | b. | 1.4690 inches | |  | c. | 0.8903 inch | |  | d. | 1.7806 inches | |  | e. | 1.6148 inches |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC064 - Solve a cubic equation in applications | | *OTHER:* | Application | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 11. A sphere has a volume of 3.32 cubic inches. If the sphere's volume can vary between 2.52 cubic inches and 5.12 cubic inches, how can the radius vary? Round your answer to five decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | Radius can vary between 0.77563 inch and 1.10558 inches. | |  | b. | Radius can vary between 0.12544 inch and 2.72544 inches. | |  | c. | Radius can vary between 1.40684 inches and 2.00530 inches. | |  | d. | Radius can vary between 1.34006 inches and 1.69726 inches. | |  | e. | Radius can vary between 0.84418 inch and 1.06920 inches. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | CALC063 - Solve a linear equation in applications | | *OTHER:* | Application | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 12. Find the limit *L*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | LCalc11.1.2.0 - Finding Limits Graphically and Numerically | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:54 AM | | *DATE MODIFIED:* | 1/11/2017 9:54 AM | |

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| 13. Find the limit *L*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | LCalc11.1.2.0 - Finding Limits Graphically and Numerically | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:55 AM | | *DATE MODIFIED:* | 1/11/2017 9:55 AM | |

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| 14. What is the limit of  as *x* approaches ?  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Easy | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | LCalc11.1.2.0 - Finding Limits Graphically and Numerically | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:55 AM | | *DATE MODIFIED:* | 1/11/2017 9:55 AM | |

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| 15. The graph of  is shown in the figure. Find  such that if , then .  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Medium | | *REFERENCES:* | Section 1.2 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *LEARNING OBJECTIVES:* | LCalc11.1.2.0 - Finding Limits Graphically and Numerically | | *OTHER:* | Skill | | *DATE CREATED:* | 1/11/2017 9:55 AM | | *DATE MODIFIED:* | 1/11/2017 9:55 AM | |