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| 1. Determine the exact values of the three trigonometric functions sine, cosine, and tangent of the angle *θ*.  ​  ​  where  ​   |  |  |  | | --- | --- | --- | |  | a. | sin *θ* =  cos *θ* =  tan *θ* = | |  | b. | sin *θ* =  cos *θ* =  tan *θ* = | |  | c. | sin *θ* =  cos *θ* =  tan *θ* = | |  | d. | sin *θ* =  cos *θ* =  tan *θ* = | |  | e. | sin *θ* =  cos *θ* =  tan *θ* = |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.5a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/27/2014 1:17 AM | |

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| 2. Determine the exact values of the three trigonometric functions sine, cosine, and tangent of the angle *θ*.  ​  ​  where  ​   |  |  |  | | --- | --- | --- | |  | a. | sin *θ* = –  cos *θ* = –  tan *θ* = | |  | b. | sin *θ* =  –  cos *θ* = –  tan *θ* = – | |  | c. | sin *θ* = –  cos *θ* = –  tan *θ* =  – | |  | d. | sin *θ* = –  cos *θ* = –  tan *θ* = – | |  | e. | sin *θ* = –  cos *θ* = –  tan *θ* = – |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.6a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/21/2014 2:19 AM | |

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| 3. Determine the exact values of the three trigonometric functions csc, sec, and cot of the angle *θ*.  ​  ​​  where  ​   |  |  |  | | --- | --- | --- | |  | a. | csc *θ* =  sec *θ* =  cot *θ* = | |  | b. | csc *θ* =  sec *θ* =  cot *θ* = | |  | c. | csc *θ* =  sec *θ* =  cot *θ* = | |  | d. | csc *θ* =  sec *θ* =  cot *θ* = | |  | e. | csc *θ* =  sec *θ* =  cot *θ* = |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.5b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 6:51 AM | |

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| 4. Determine the exact values of the three trigonometric functions csc, sec, and  cot of the angle *θ*.  ​  ​  where *a = 15*and *b = 8.*  ​   |  |  |  | | --- | --- | --- | |  | a. | csc *θ* = –  sec *θ* = –  cot *θ* = | |  | b. | csc*θ* = –  sec *θ* = –  cot *θ* = – | |  | c. | csc *θ* = –  sec *θ* = –  cot *θ* = – | |  | d. | csc *θ* = –  sec *θ* = –  cot *θ* = – | |  | e. | csc *θ* =  –  sec *θ* = –  cot *θ* = – |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.6b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 7:12 AM | |

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| 5. The point is on the terminal side of an angle in standard position. Determine the exact values of the three trigonometric functions sine, cosine, and tangent of the angle *θ*.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | sin *θ* =  cos *θ* =  tan *θ* = | |  | b. | sin *θ* =  cos *θ* =  tan *θ* = | |  | c. | sin *θ* =  cos *θ* =  tan *θ* = | |  | d. | sin *θ* =  cos *θ* =  tan *θ* = | |  | e. | sin *θ* =  cos *θ* =  tan *θ* = |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.9 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/21/2014 2:32 AM | |

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| 6. The point is on the terminal side of an angle in standard position. Determine the exact values of the three trigonometric functions sine, cosine, and tangent of the angle *θ.*  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | sin *θ* =  cos *θ* =  tan *θ* = | |  | b. | sin *θ* =  cos *θ* =  tan *θ* = | |  | c. | sin *θ* =  cos *θ* =  tan *θ* = | |  | d. | sin *θ* =  cos *θ* =  tan *θ* = | |  | e. | sin *θ* =  cos *θ* =  tan *θ* = |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.10 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/21/2014 2:35 AM | |

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| 7. Find the values of the trigonometric functions sine and sec of *θ* with the given constraint.  ​   |  |  | | --- | --- | | *Function Value* | *Constra* int | | *tan θ = –* | *sin θ > 0* |   ​​   |  |  |  | | --- | --- | --- | |  | a. | *sin θ = –*  *sec θ =* | |  | b. | *sin θ =*  *sec θ = –* | |  | c. | *sin θ =*  *sec θ = –* | |  | d. | *sin θ =*  *sec θ =* | |  | e. | *sin θ = –*  *sec θ = –* |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.19 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:35 AM | |

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| 8. Find the reference angle , and  sketch  and  in standard position.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.41 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:09 AM | |

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| 9. Find the reference angle , and sketch  and  in standard position.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. | = 35 | d. | = 65 | |  | e. | = 55 |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.43 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 7:17 AM | |

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| 10. Find the reference angle , and sketch  and  in standard position.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.46 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:26 AM | |

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| 11. Find the reference angle .  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.47 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 1:47 AM | |

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| 12. Find the reference angle .  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.48 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:25 AM | |

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| 13. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  sin 11°  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.4908 | |  | b. | 0.1908 | |  | c. | 0.5908 | |  | d. | 0.2908 | |  | e. | 0.6908 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.71 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 6:56 AM | |

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| 14. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  sec 221°  ​   |  |  |  | | --- | --- | --- | |  | a. | –1.3250 | |  | b. | –1.0250 | |  | c. | –0.8250 | |  | d. | –0.9250 | |  | e. | –1.2250 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.72 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 6:57 AM | |

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| 15. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | –0.1736 | |  | b. | 0.3264 | |  | c. | –0.0736 | |  | d. | 0.1264 | |  | e. | 0.2264 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.73 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:01 AM | |

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| 16. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  tan 306°  ​   |  |  |  | | --- | --- | --- | |  | a. | –1.0764 | |  | b. | –1.2764 | |  | c. | –1.3764 | |  | d. | –0.8764 | |  | e. | –0.9764 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.75 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:01 AM | |

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| 17. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  tan 4.9  ​   |  |  |  | | --- | --- | --- | |  | a. | –4.9675 | |  | b. | –4.8675 | |  | c. | –5.1675 | |  | d. | –4.7675 | |  | e. | –5.2675 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.79 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:02 AM | |

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| 18. The displacement from equilibrium of an oscillating weight suspended by a spring is given by  ​  ​  where y is the displacement in centimeters and *t* is the time in seconds (see figure). Find the displacement when . (Round your answers to nearest tenth.)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 1.200 cm | |  | b. | 1.100 cm | |  | c. | 1.000 cm | |  | d. | 0.800 cm | |  | e. | 1.300 cm |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.107a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:05 AM | |

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| 19. Evaluate the trigonometric function. Round your answer to four decimal places. (Be sure the calculator is set in the correct angle mode.)  ​  sec 0.21  ​   |  |  |  | | --- | --- | --- | |  | a. | 1.5225 | |  | b. | 1.1225 | |  | c. | 1.4225 | |  | d. | 1.0225 | |  | e. | 1.3225 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.84 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 8:23 AM | |

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| 20. The displacement from equilibrium of an oscillating weight suspended by a spring is given by  ​  , where *y* is the displacement in centimeters and *t* is the time in seconds (see figure). Find the displacement when .(Round your answers to two decimal places.)  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 1.76 cm | |  | b. | 1.66 cm | |  | c. | 1.46 cm | |  | d. | 1.86 cm | |  | e. | 1.96 cm |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.107b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:25 AM | |

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| 21. The displacement from equilibrium of an oscillating weight suspended by a spring and subject to the damping effect of friction is given by  where y is the displacement in centimeters and *t* is the time in seconds (see figure). Find the displacement when . Round your answer to two decimal places.  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.89 cm | |  | b. | 0.59 cm | |  | c. | 0.99 cm | |  | d. | 1.09 cm | |  | e. | 0.79 cm |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.108b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:26 AM | |

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| 22. The displacement from equilibrium of an oscillating weight suspended by a spring and subject to the damping effect of friction is given by  ​  where *y* is the displacement in centimeters and *t* is the time in seconds (see figure). Find the displacement when .(Round your answer two decimal places.)  ​  ​  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.71 cm | |  | b. | 1.11 cm | |  | c. | 1.31 cm | |  | d. | –0.91 cm | |  | e. | 0.91 cm |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.108b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:28 AM | |

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| 23. The current  *I* (in amperes) when 100 volts is applied to a circuit is given by  ​  ​  where *t* is the time (in seconds) after the voltage is applied. Approximate the current at  *t =* 0.8 second after the voltage is applied.(Round your answers to two decimal places.)  ​   |  |  |  | | --- | --- | --- | |  | a. | 1.12 ampere | |  | b. | 1.02 ampere | |  | c. | 0.72 ampere | |  | d. | 0.82 ampere | |  | e. | 0.92 ampere |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.109 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:30 AM | |

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| 24. An airplane, flying at an altitude of  8 miles, is on a flight path that passes directly over an  observer (see figure). If  is the angle of elevation from the observer to the plane, find the distance from the observer to the plane when °. (Round your answers to two decimal place.)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 11.24 mi | |  | b. | 10.24 mi | |  | c. | 9.24 mi | |  | d. | 12.24 mi | |  | e. | 13.24 mi |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.110 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:30 AM | |

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| 25. Determine whether the statement is true or false. Justify your answer.  In each of the four quadrants, the signs of the cosec function and cosine function will be the same.  ​   |  |  |  | | --- | --- | --- | |  | a. | True. | |  | b. | False. In each of the four quadrants, the signs of the cosec function and the sine function will be the same because these functions are reciprocals of each other. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.111 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:14 AM | |

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| 26. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  csc(–310°)  ​   |  |  |  | | --- | --- | --- | |  | a. | 2.3054 | |  | b. | 3.3054 | |  | c. | 1.3054 | |  | d. | 4.3054 | |  | e. | 1.8054 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.74 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:35 AM | |

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| 27. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  cot 171°  ​   |  |  |  | | --- | --- | --- | |  | a. | –5.3138 | |  | b. | –4.3138 | |  | c. | –6.3138 | |  | d. | –3.3138 | |  | e. | –5.8138 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.76 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:36 AM | |

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| 28. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  tan ( –187°)  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.8772 | |  | b. | 1.8772 | |  | c. | –0.1228 | |  | d. | 2.8772 | |  | e. | 0.3772 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.78 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/26/2014 2:41 AM | |

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| 29. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 2.2321 | |  | b. | 1.7321 | |  | c. | 2.7321 | |  | d. | 3.7321 | |  | e. | 4.7321 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.81 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/27/2014 1:21 AM | |

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| 30. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.5858 | |  | b. | –0.4142 | |  | c. | 0.0858 | |  | d. | 2.5858 | |  | e. | 1.5858 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.82 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:12 AM | |

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| 31. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 0.8249 | |  | b. | 3.3249 | |  | c. | 0.3249 | |  | d. | 2.3249 | |  | e. | 1.3249 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.85 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:11 AM | |

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| 32. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 1.8637 | |  | b. | 3.8637 | |  | c. | 4.3637 | |  | d. | 6.8637 | |  | e. | 4.8637 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.86 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/27/2014 1:37 AM | |

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| 33. Evaluate the trigonometric function. Round your answer to four decimal places.  ​  cot 3.35  ​   |  |  |  | | --- | --- | --- | |  | a. | 7.7286 | |  | b. | 5.7286 | |  | c. | 5.2286 | |  | d. | 6.7286 | |  | e. | 4.7286 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.80 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/27/2014 1:41 AM | |

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| 34. Given the figure below, determine the value of .  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.6b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/18/2015 6:15 AM | |

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| 35. The point  is on the terminal side of an angle in standard position. Determine the exact value of .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.9 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/28/2014 12:33 AM | |

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| 36. The point  is on the terminal side of an angle in standard position. Determine the exact value of .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.11 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/28/2014 12:41 AM | |

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| 37. State the quadrant in which *θ* lies if  <  *0* and  > *0​*.   |  |  |  | | --- | --- | --- | |  | a. | Quadrant II | |  | b. | Quadrant IV | |  | c. | Quadrant I | |  | d. | Quadrant III |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.15 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 7:54 AM | |

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| 38. Determine the exact value of  when  and .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.20 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:48 AM | |

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| 39. Determine the exact value of  when  and   < 0.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.23 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:00 AM | |

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| 40. The terminal side of *θ* lies on the line  in the fourth quadrant. Find the exact value of .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.32 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/28/2014 2:58 AM | |

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| 41. Determine the exact value of the  of the quadrant angle *π*.   |  |  |  | | --- | --- | --- | |  | a. | 0 | |  | b. | undefined | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.33 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/28/2014 3:04 AM | |

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| 42. Determine the exact value of the  of the quadrant angle .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. | 0 | |  | e. | undefined |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.39 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 11/28/2014 3:07 AM | |

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| 43. Determine the exact value of .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. | 1 | |  | e. | –1 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.49 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:02 AM | |

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| 44. Use a calculator to evaluate cot 335. Round your answer to four decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | –2.1445 | |  | b. | –2.6445 | |  | c. | –0.4470 | |  | d. | –1.1970 | |  | e. | –1.7453 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.75 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:07 AM | |

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| 45. Use a calculator to evaluate . Round your answer to four decimal places.   |  |  |  | | --- | --- | --- | |  | a. | 17.3432 | |  | b. | 17.8432 | |  | c. | 6.2599 | |  | d. | 13.8154 | |  | e. | 5.5099 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.84 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:23 AM | |

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| 46. Given the equation below, determine two solutions such that .  ​cos *θ* =   |  |  |  | | --- | --- | --- | |  | a. | ​*θ* = 225, 135 | |  | b. | *θ* = 135, 225 | |  | c. | *θ* = 150, 210 | |  | d. | *θ* = 300, 240 | |  | e. | *θ* = 30 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.88a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:26 AM | |

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| 47. Given the equation below, determine two solutions such that .  sec​ *θ* =  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. | ​ | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.90b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:15 AM | |

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| 48. Find the point (*x*, *y*) on the unit circle that corresponds to the real number . Use your results to evaluate tan *t*.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.93 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 7:13 AM | |

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| 49. Find the point  on the unit circle that corresponds to the real number . Use your results to evaluate cos *t*.  ​   |  |  |  | | --- | --- | --- | |  | a. | cos *t* = 1 | |  | b. | cos *t* = –1 | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.95 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 8:04 AM | |

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| 50. The displacement from equilibrium of an oscillating weight suspended by a spring is given by , where *y* is the displacement in centimeters and *t* is the time in seconds. Find the displacement when , rounding your answer to four decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | 2.2693 cm | |  | b. | –3.3563 cm | |  | c. | –0.7275 cm | |  | d. | –6.5364 cm | |  | e. | 10.0903 cm |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 6.3.108 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 12/1/2014 4:13 AM | |

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| 51. The point (7, 24) is on the terminal side of an angle in standard position. Determine the exact value of cos *θ*.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 8:05 AM | |

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| 52. The point (*–7*,–24) is on the terminal side of an angle in standard position. Determine the exact value of .   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/16/2015 8:20 AM | |

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| 53. State the quadrant in which *θ* lies if  > 0 and > 0.   |  |  |  | | --- | --- | --- | |  | a. | Quadrant II | |  | b. | Quadrant III | |  | c. | Quadrant IV | |  | d. | Quadrant I |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 12/1/2014 5:03 AM | |

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| 54. Use a calculator to evaluate . Round your answer to four decimal places.   |  |  |  | | --- | --- | --- | |  | a. | –0.9589 | |  | b. | 0.0872 | |  | c. | –0.4128 | |  | d. | –0.4282 | |  | e. | –1.7089 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:23 PM | | *DATE MODIFIED:* | 5/15/2015 8:10 AM | |