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| 1. Estimate the slope of the line.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 5.5 | |  | b. | 3.5 | |  | c. | 4.5 | |  | d. | 6.5 | |  | e. | Undefined |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.13 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/24/2014 4:22 AM | |

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| 2. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​  *m* = –8  *y*-intercept: (0, 1) | b. | ​  *m* = –1  *y*-intercept: (0, 1) | |  | c. | ​  *m* is undefined.  *y*-intercept: (0, 1) | d. | ​  *m* = 1  *y*-intercept: (0, 1) | |  | e. | ​  *m* = 8  *y*-intercept: (0, 1) |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.17 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:48 AM | |

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| 3. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​  *m* = –1  *y*-intercept: (0, 3) | b. | *m* = 1  *y*-intercept: (0, –3) | |  | c. | ​  *m* is undefined.  *y*-intercept: (0, 3) | d. | ​  *m* = 3  *y*-intercept: (0, 3) | |  | e. | ​  *m* = –3  *y*-intercept: (0, –3) |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.18 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:46 AM | |

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| 4. Find the slope and *y*-intercept (if possible) of the equation of the line. Select  the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = –6  *y*-intercept: (0, 6) | b. | ​  *m* is undefined.  *y*-intercept: (0, 6) | |  | c. | ​  ​  *y*-intercept: (0, 6) | d. | *m* =  –1  *y*-intercept: (0, 6) | |  | e. | ​  *m* = 6  *y*-intercept: (0, 6) |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.19 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:45 AM | |

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| 5. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​*m* is undefined.  There is no *y*-intercept. | b. | ​*m* = –3  *y*-intercept: (0, 5) | |  | c. | ​*m* is undefined.  There is no *y*-intercept. | d. | ​*m* = –5  *y*-intercept: (0, 3) | |  | e. | ​  ​*m* is undefined.  There is no *y*-intercept. |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.21 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:50 AM | |

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| 6. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​*m* = 0  *y*-intercept: (0, –2) | b. | ​*m =* 0  There is no *y*-intercept. | |  | c. | *m* = –6  *y*-intercept: (0, 3) | d. | ​*m* = –3  *y*-intercept: (0, 6) | |  | e. | ​  ​*m* is undefined.  *y*-intercept: (0, –2) |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.22 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:53 AM | |

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| 7. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = –3  *y*-intercept: (0, –3) | b. | *m*= 0  *y*-intercept: (0, 3) | |  | c. | *m* is undefined.  There is no *y*-intercept. | d. | *m*= 0  There is no *y*-intercept. | |  | e. | ​  *m =* 0  There is no *y*-intercept. |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.25 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:57 AM | |

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| 8. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​*m* = 0  *y*-intercept: (0,4) | b. | ​*m* = 0  *y*-intercept: (0,–4) | |  | c. | ​*m* is undefined.  There is no *y*-intercept. | d. | ​*m =* 0  *y*-intercept: (0,–4) | |  | e. | ​  ​*m =* 0  There is no *y*-intercept. |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.26 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 5:59 AM | |

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| 9. Find the slope and *y*-intercept (if possible) of the equation of the line. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = –3  *y*-intercept: (0,2) | b. | *m* is undefined.  There is no *y*-intercept. | |  | c. | ​*m* = –2  *y*-intercept: (0,3) | d. | ​  *m* is undefined.  There is no *y*-intercept. | |  | e. | ​  *m* is undefined.  There is no *y*-intercept. |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.27 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:02 AM | |

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| 10. Find the slope of the line passing through the given pair of points.  ​  (0, 9), (2, 0)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = – | b. | *m* = | |  | c. | *m* = – | d. | *m* = | |  | e. | *m* = – |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.29 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:06 AM | |

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| 11. Find the slope of the line passing through the pair of points.  ​  (14, 0), (0, –3)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = | b. | *m* = | |  | c. | *m* = | d. | *m* = – | |  | e. | *m* = – |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.30 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:34 AM | |

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| 12. Find the slope of the line passing through the pair of points.  ​  (–1, –8), (3, 7)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = | b. | *m* = | |  | c. | *m* = – | d. | *m* = – | |  | e. | *m* = |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.31 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:37 AM | |

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| 13. Find the slope of the line passing through the pair of points.  ​  (8, –4), (1, –4)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = 0 | b. | *m* = – | |  | c. | *m* = | d. | *m* is undefined | |  | e. | *m* = |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.33 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:39 AM | |

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| 14. Find the slope of the line passing through the pair of points.  ​  (10, 12), (12, –12)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = –12 | b. | *m* = –12 | |  | c. | *m* = | d. | *m* = | |  | e. | *m* = |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.32 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:42 AM | |

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| 15. Find the slope of the line passing through the pair of points.  ​  (0, –8), (–6, 0)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = | b. | *m* = | |  | c. | *m* = – | d. | *m* = | |  | e. | *m* = – |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.36 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:45 AM | |

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| 16. Find the slope of the line passing through the pair of points.  ​  (4.1, 3.1), (–3.8, 3.1)  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *m* = 0.40 | b. | *m* = –Infinity | |  | c. | *m* = 0.80 | d. | *m* = 0.00 | |  | e. | *m* = 20.67 |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.39 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/18/2015 5:22 AM | |

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| 17. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select correct answer for the line.  ​  P(0, –7),  *m* = 8  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. |  | |  | c. | ​ | d. | ​ | |  | e. | ​  ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.51 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:54 AM | |

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| 18. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. | ​ | d. |  | |  | e. | ​ |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.53 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 6:57 AM | |

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| 19. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. |  | d. |  | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.54 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:00 AM | |

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| 20. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select the correct answer for the line.  ​  P(3, –7), *m* is undefined.  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. | ​ | |  | c. |  | d. | ​ | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.59 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:02 AM | |

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| 21. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select correct answer for the line.  ​  P(4, ), *m* = 0  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | *y* = 4*x* + | |  | c. | *y* =  ​  ​ | d. | *x* = 4*y* + | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.61 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:04 AM | |

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| 22. Find the slope-intercept form of the equation of the line that passes through the given point and has the indicated slope *m*. Select correct answer for the line.  ​  P(2.4, –8.7), *m* = –4  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *x* = 2.4*y* + 0.9 | b. | *x* = 2.4 | |  | c. | *y* = 2.4  ​ | d. | *y* = –4*x* + 0.9  ​ | |  | e. | *y* = 2.4*x* + 0.9 |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.64 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:06 AM | |

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| 23. Find the slope-intercept form of the equation of the line passing through the points. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *y* = *x–*2 | b. | *y* = *x–*6 | |  | c. | *y* = *x+*2 | d. | *y* = *x*–4 | |  | e. | *y* = *x+*6 |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.65 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:11 AM | |

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| 24. Find the slope-intercept form of the equation of the line passing through the points. Select the correct answer for the line.  ​  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | *y* = *x+*1 | b. | *y* = *x*–6 | |  | c. | *y* = *x*–2 | d. | *y* = *x*–1 | |  | e. | *y* = – *x*–2 |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.66 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:14 AM | |

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| 25. Determine whether the lines are parallel, perpendicular, or neither.  ​  L1: *y* = *x –* 4  L2: *y* = *x –* 3  ​   |  |  |  | | --- | --- | --- | |  | a. | Perpendicular | |  | b. | Parallel | |  | c. | Neither |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.79 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/25/2014 5:44 AM | |

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| 26. Determine whether the lines are parallel, perpendicular, or neither.  ​  L1: *y* = *x –* 4  L2: *y* = –*x –* 2  ​   |  |  |  | | --- | --- | --- | |  | a. | Parallel | |  | b. | Perpendicular | |  | c. | Neither |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.81 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/25/2014 6:01 AM | |

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| 27. Determine whether the lines are parallel, perpendicular, or neither.  ​  L1: *y* = *x –* 9  L2: *y* = –*x –* 2  ​   |  |  |  | | --- | --- | --- | |  | a. | Perpendicular | |  | b. | Neither | |  | c. | Parallel |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.82 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/25/2014 6:08 AM | |

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| 28. Use the *intercept form* to find the equation of the line with the given intercepts. The intercept form of the equation of a line with intercepts (*a*, 0) and (0, *b*) is  ​  .  ​  *x*-intercept: (3, 0)  *y*-intercept: (0, 9)  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.97 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/11/2014 8:03 AM | |

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| 29. Use the *intercept form* to find the equation of the line with the given intercepts. The intercept form of the equation of a line with intercepts (*a*, 0) and (0, *b*) is  ​  ​  ​  *x*-intercept: (–3, 0)  *y*-intercept: (0, 8)  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.98 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/11/2014 8:15 AM | |

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| 30. Use the *intercept form* to find the equation of the line with the given intercepts. The intercept form of the equation of a line with intercepts (*a*, 0) and (0, *b*) is  ​  ​  ​  *x*-intercept:  *y*-intercept:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.99 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:17 AM | |

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| 31. Use the *intercept form* to find the equation of the line with the given intercepts. The intercept form of the equation of a line with intercepts (*a*, 0) and (0, *b*) is  ​  ​  ​  *x*-intercept: (, 0)  *y*-intercept:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.100 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 8:59 AM | |

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| 32. Use the *intercept form* to find the equation of the line with the given intercepts. The intercept form of the equation of a line with intercepts (*a*, 0) and (0, *b*) is  ​​  Point on line: (4, 6)  *x*-intercept: (*c*, 0)  *y*-intercept: (0, *c*),   *c* ≠ 0  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.101 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:19 AM | |

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| 33. Estimate the slope of the line.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | –2 | |  | b. | –3 | |  | c. | –4 | |  | d. | –1 | |  | e. | Undefined |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.15 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:20 AM | |

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| 34. The following is the slope of line representing annual sale *y* in term of time *x* in year. Use the slope to interpret any change in annual sales for a one-year increase in time.  ​  The line has a slope of  *m* = 134.  ​   |  |  |  | | --- | --- | --- | |  | a. | No change in sales | |  | b. | Sales decreasing 134 units/yr | |  | c. | Sales increasing 134 units/yr | |  | d. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.111a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/25/2014 11:47 PM | |

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| 35. The following is the slope of line representing annual sale *y* in term of time *x* in year. Use the slope to interpret any change in annual sales for a one-year increase in time.  ​  The line has a slope of  *m*= –20.  ​   |  |  |  | | --- | --- | --- | |  | a. | Sales increasing 20 units/yr | |  | b. | Sales decreasing 20 units/yr | |  | c. | No change in sales | |  | d. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.111c | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:20 AM | |

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| 36. The following is the slope of line representing daily revenue *y* in term of time *x* in day. Use the slope to interpret any change in daily revenues for a one-day increase in time.  ​  The line has a slope of  *m*= 500.  ​   |  |  |  | | --- | --- | --- | |  | a. | Revenues increasing 500 units/day | |  | b. | No change in revenues | |  | c. | Revenues decreasing 500 units/day | |  | d. | None of the above |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.112a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/25/2014 11:49 PM | |

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| 37. The graph shows the average salaries for senior high school principals from 1996 through 2008.  ​  ​  Find the slope of the line segment connecting the points for the years 1998 and 2002.  ​   |  |  |  | | --- | --- | --- | |  | a. | –2394 | |  | b. | 2391 | |  | c. | –2391 | |  | d. | 2396 | |  | e. | 2392 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.113b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/11/2014 11:38 PM | |

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| 38. The graph shows the sales (in billions of dollars) for Apple Inc. for the years 2001 through 2007.  ​  Find the slope of the line segment connecting the points for the years 2003 and 2004. Round the answer to two decimal places.  ​   |  |  |  | | --- | --- | --- | |  | a. | –5.07 | |  | b. | 2.07 | |  | c. | 7.07 | |  | d. | 3.07 | |  | e. | –2.07 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.114b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 8:04 AM | |

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| 39. You are driving on a road that has a 5% uphill grade. This means that the slope of the road is . Approximate the amount of vertical change in your position if you drive 400 feet.  ​   |  |  |  | | --- | --- | --- | |  | a. | 18 ft | |  | b. | 21 ft | |  | c. | 22 ft | |  | d. | 19 ft | |  | e. | 20 ft |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.115 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:21 AM | |

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| 40. A sub shop purchases a used pizza oven for $885. After 5 years, the oven will have to be replaced. Select the linear equation giving the value *V* of the equipment during the 5 years it will be in use.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.121 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:22 AM | |

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| 41. A school district purchases a high-volume printer, copier, and scanner for $20,000.  After 10 years, the equipment will have to be replaced. Its value at that time is expected to be $2,600. Select a linear equation giving the value of the equipment during the 10 years it will be in use.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.122 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/12/2014 12:09 AM | |

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| 42. A discount outlet is offering a 70% discount on all items. Select a linear equation giving the sale price *S* for an item with a list price *L*.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.123 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/12/2014 12:12 AM | |

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| 43. A microchip manufacturer pays its assembly line workers $12.25 per hour. In addition, workers receive a piecework rate of $0.3 per unit produced. Select a linear equation for the hourly wage *W* in terms of the number of units *x* produced per hour.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.124 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:23 AM | |

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| 44. A pharmaceutical salesperson receives a monthly salary of $2600 plus a commission of 2% of sales. Select a linear equation for the sales-person’s monthly wage *W*  in terms of monthly sales *S*.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.125 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 1:30 AM | |

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| 45. A sales representative of a company using a personal car receives $160 per day for lodging and meals plus $0.53 per mile driven. Select a linear equation giving the daily cost *C* to the company in terms of *x,* the number of miles driven.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.126 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 1:39 AM | |

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| 46. A real estate office handles an apartment complex with 60 units. When the rent per unit is $98 per month, all 60 units are occupied. However, when the rent is $630 per month, the average number of occupied units drops to 46. Assume that the relationship between the monthly rent *p* and the demand *x* is linear.  Select the equation of the line giving the demand *x* in terms of the rent *p.*  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = 532*p* + 62.58 | |  | b. | *x* = –38*p* – 62.58 | |  | c. | *x* = *p* + 62.58 | |  | d. | *x* = –38*p* + 62.58 | |  | e. | *x* = 14*p* + 62.58 |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.132a | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/12/2014 12:55 AM | |

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| 47. The length and width of a rectangular garden are 16 meters and 11 meters, respectively. A walkway of width *x* surrounds the garden.  ​Write the equation for the perimeter *y* of the walkway in terms of *x.*  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.133b | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:24 AM | |

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| 48. Determine whether the statement is true or false. Justify your answer.  ​  A line with a slope of  is steeper than a line with a slope of .  ​   |  |  |  | | --- | --- | --- | |  | a. | True. The slope with the smallest magnitude corresponds to the steepest line. | |  | b. | False. The slope with the greatest magnitude corresponds to the steepest line. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.137 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 1:53 AM | |

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| 49. Write the slope-intercept form of the equation of the line through the given point perpendicular to the given line.  point: (–4, 9)                   line: 6*x* - 30*y*  = 6   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. | ​ | |  | c. | ​ | |  | d. | ​ | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.87 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:25 AM | |

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| 50. Carl's Tractor Service purchases a used brush mower  for $1445. The machine has a useful life of 5 years after which time another one will have to be purchased. Assume depreciation of the machine is linear. Write a linear equation giving the value *V* of the used brush mower  during the 5 years it will be in use.   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. | ​ |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 2.1.121 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:25 AM | |

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| 51. Find the slope of the line passing through the pair of points.  ​  P(–4, 3); Q(2, –9).  ​   |  |  |  | | --- | --- | --- | |  | a. | *m* = 1 | |  | b. | *m* = –7 | |  | c. | *m* = 4 | |  | d. | *m* = –2 | |  | e. | *m* = –1 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:36 AM | |

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| 52. Find the slope of the line passing through the pair of points.  ​  P(5, 4); Q(9, 20).​  ​   |  |  |  | | --- | --- | --- | |  | a. | *m* = 5 | |  | b. | *m* = 4 | |  | c. | *m* = 2 | |  | d. | *m* = 3 | |  | e. | *m* = 6 |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:36 AM | |

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| 53. Find the slope of the line passing through the pair of points.  ​  *P* (–9, 14); *Q* (–18, –2)  ​   |  |  |  | | --- | --- | --- | |  | a. | *m* = | |  | b. | *m* = – | |  | c. | *m* = – | |  | d. | *m* = | |  | e. | none of these |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:35 AM | |

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| 54. Find the slope of the line passing through the pair of points.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | *m* = 19 | |  | b. | *m* = 1 | |  | c. | *m* = 2 | |  | d. | *m* = -1 | |  | e. | none of these |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:37 AM | |

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| 55. Draw the line using the slope and *y*-intercept.  ​  *y* + 1 = 2*x*  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​ | b. | ​ | |  | c. | ​ | d. | ​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:38 AM | |

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| 56. Find the slope of the line.  ​  *y* = 9*x* + 25  ​   |  |  |  | | --- | --- | --- | |  | a. | *m* = –9 | |  | b. | *m* = 10 | |  | c. | *m* = 13 | |  | d. | *m* = 9 | |  | e. | *m* = 6 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:38 AM | |

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| 57. Find the *y*-intercept of the line determined by the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:18 AM | |

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| 58. Find the slope of the line determined by the equation.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:22 AM | |

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| 59. Write the equation of the line that passes through the point P(0, 0) and is parallel to the line *y* = 8*x* – 7.  ​   |  |  |  | | --- | --- | --- | |  | a. | *x* = 8*y* | |  | b. | *y* = 7*x* +8 | |  | c. | *y* = –7*x* | |  | d. | *y* = 8*x* | |  | e. | *y* = 7*x* |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:40 AM | |

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| 60. Write the equation of the line that passes through the point *P* (0, 0) and is perpendicular to the line *y* = – 2*x* + 10.  ​   |  |  |  | | --- | --- | --- | |  | a. |  | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:41 AM | |

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| 61. Write the equation of the line that passes through the point P(4, 3) and is perpendicular to the line *y* = – 5*x* + 2.  ​   |  |  |  | | --- | --- | --- | |  | a. | ​ | |  | b. |  | |  | c. |  | |  | d. |  | |  | e. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 5/16/2015 7:56 AM | |

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| 62. Find the slope of the line through *P*(–8, –5) and *Q*(2, 35).   |  |  | | --- | --- | | *ANSWER:* | 4​ | | *POINTS:* | 1 | | *QUESTION TYPE:* | Numeric Response | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:32 AM | |

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| 63. A line passes through the two points *P*(3, 3),and *Q*(–5, –5). Write the equation in slope-intercept form.   |  |  | | --- | --- | | *ANSWER:* | *y* = *x* | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:33 AM | |

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| 64. Write the equation of the line that passes through the point *P* (0, 0), and is parallel to the line *y* = 8*x* - 1.  ​  Write the answer in slope-intercept form.   |  |  | | --- | --- | | *ANSWER:* | *y* = 8 · *x* | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:35 AM | |

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| Tell whether the slope of the line is positive, negative, 0, or undefined.  *Choose the correct letter for each question.*  ​   |  |  | | --- | --- | | a. |  | | b. |  | | c. |  | | d. |  |  |  |  | | --- | --- | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | True | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 11/13/2014 4:06 AM | |

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| 65. undefined slope   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |

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| 66. negative slope   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 67. zero slope   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 68. positive slope   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| Determine whether the line through the given points and the line through *R* (8,7) and *S*(5,14) are parallel, perpendicular, or neither.  ​  *Choose the correct letter for each question.*   |  |  | | --- | --- | | a. | *P*(16, 14); *Q*(10, 28) | | b. | *P*(21, –24); *Q*(42, –15) | | c. | *P*(14, 14); *Q*(0, –10) |  |  |  | | --- | --- | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/10/2014 4:17 PM | | *DATE MODIFIED:* | 9/26/2014 4:41 AM | |

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| 69. perpendicular   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 70. neither   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 71. parallel   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |