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| 2. Sketch the graph of the function by making a table of values. Use a calculator if necessary.  ​  *​f*​(*​x*) =    |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  | |

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| 3. Identify the graphs of the functions *​y*​ = 2*​x* and *​y*​ = ​4*​x*.  ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  | |

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| 4. Find the exponential function *f*(*x*) = *a​x* whose graph is given.  ​     |  |  |  | | --- | --- | --- | |  | a. | *f*(*x*) = 3*​x* | |  | b. | *f*(*x*) = 3*​x* + 3 | |  | c. | *f*(*x*) = – 3*​x* | |  | d. | *f*(*x*) = 3*​–x* | |  | e. | *f*(*x*) = *​x*​3 | |

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| 5. Find the exponential function *f*(*x*) = *​ax* whose graph is given.  ​     |  |  |  | | --- | --- | --- | |  | a. | *f*(*x*) = – 4*​x* | |  | b. | *f*(*x*) = 4*​x* + 4 | |  | c. | *f*(*x*) = *x*​4 | |  | d. | *f*(*x*) = 4–*x* | |  | e. | *f*(*x*) = 4*​x* | |

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| 6. Determine the graph of the function *​y*​ = 4*​x*​ + 2.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  | |

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| 7. Identify the graph of the function *y* = 2*​x*.   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  | |  | e. |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 6:59 AM | |

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| 9. Graph the function, not by plotting points, but by starting from the graph in the figure. State the domain, range, and asymptote.  ​  *​f*​(*​x*) = 9*​–x*     |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Domain: (0, ∞). Range: (–∞, ∞).  Asymptote: *y* = 0. | b. | Domain: (–∞, ∞). Range: (0, ∞).  ​  Asymptote: *y* = 0. | |  | c. | Domain: (0, ∞). Range: (∞, ∞).  Asymptote: *y* = 0. | d. | Domain: (–∞, ∞). Range: (0, ∞).  Asymptote: *x* = 0. | |  | e. | Domain: (0, ∞). Range: (–∞, ∞).  Asymptote: *​x*​ = 0. |  |  |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 7:14 AM | |

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| 10. Graph the function, not by plotting points, but by starting from the graph in the figure. State the domain, range, and asymptote.  ​  *g*(*x*) = 3*​x*​ – 1     |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Domain: (–∞, ∞). Range: (–1, ∞).  Asymptote: *y*​ = –1. | b. | Domain: (–1, ∞). Range: (–∞, ∞).  Asymptote: *x*​ = –1. | |  | c. | Domain: (–1, ∞). Range: (–∞, ∞).  Asymptote: *y*​ = –1. | d. | Domain: (–∞, ∞). Range: (–1, ∞).  Asymptote: *x*​ = –1. | |  | e. | Domain: (–∞, ∞). Range: (–1, ∞).  Asymptote: *​y*​ = –1. |  |  |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 7:25 AM | |

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| 12. Determine the domain and range of the function *h*(*x*) = 5 – 2*​x*.   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 7:32 AM | |

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| 13. Graph the function, not by plotting points, but by starting from the graph in the figure. State the domain, range, and asymptote.  ​  *f*(*x*) = 11*​x* + 3     |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Domain: (–∞, ∞). Range: (0, ∞).  Asymptote: *y* = 0. | b. | Domain: (–∞, ∞). Range: (0, ∞).​  Asymptote: *x* = 0. | |  | c. | Domain: (–∞, ∞). Range: (0, ∞).  Asymptote: *y* = 0. | d. | Domain: (0, ∞). Range: (–∞, ∞).  Asymptote: *y* = 0. | |  | e. | Domain: (0, ∞). Range: (–∞, ∞).  Asymptote: *​y*​ = 0. |  |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 7:40 AM | |

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| 14. Graph the function, not by plotting points, but by starting from the graph in the figure. State the domain, range, and asymptote.  ​  *​f*​(*​x*) =      |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Domain: (–∞, ∞). Range: (–∞, 0).  Asymptote: *x* = 0. | b. | Domain: (–∞, 0). Range: (–∞, ∞).  Asymptote: *x* = 0. | |  | c. | Domain: (–∞, 0). Range: (–∞, ∞).  Asymptote: *x* = 0. | d. | Domain: (–∞, 0). Range: (–∞, ∞).  Asymptote: *y* = 0. | |  | e. | Domain: (–∞, ∞). Range: (–∞, 0).  Asymptote: *​y*​ = 0. |  |  |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multi-Mode (Multiple choice) | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 7:51 AM | |

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| 21. Find the exponential function *​f*​(*​x*) = *​ax* whose graph is given.  ​     |  |  | | --- | --- | | *ANSWER:* | *​f*​(*​x*) = 6*​x* | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *STUDENT ENTRY MODE:* | Basic | | *DATE CREATED:* | 6/11/2014 8:15 AM | | *DATE MODIFIED:* | 7/23/2014 8:15 AM | |

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