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| **5.** | Perform the requested operation or operations.f(x) = 2x - 9, g(x) = 4x - 4 Find (f - g)(x) |
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| **Answer.** | -2x - 5 |

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| **6.** | Compare the graph of the given quadratic function f with the graph of y = x2f(x) = (x - 8)2 + 4 |
| **Answer.** | a translation 8 units right and 4 units up  |

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| Solve the problem Find (f  ° g)(3) when f(x) = -5x + 2 and g(x) = 8x2 + 9x + 7 |

Answer: -528

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| **8.** | Compute and simplify the difference quotient

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| f(x + h) - f(x)  |
| H |

, h ≠ 0. |

Answer: 4

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| **10.** | Consider the function h as defined. Find functions f and g so that (f ° g)(x) = h(x). h(x) = $\frac{10}{x^{2}}+4$

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| --- | --- |
| **answer.** | f(x) = x + 4, g(x) = $\frac{10}{x^{2}}$ |

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| **11.** | Solve the problem.Find (f °g)(-6) when f(x) = 4x + 4 and g(x) = 6x2 - 3x - 6. |

Answer: 916

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| **13.** | Determine whether or not the function is one-to-one.http://angellms.gcu.edu/AngelUploads/Content/47518/_assoc/E12CA94A20AD4040B8242A227BA7CCA2/image%2029%20module%203%20q27.JPG?7611 |
| **15.** | Perform the requested operation or operations.f(x) = 9x - 4, g(x) = 6x - 6Find (f - g)(x). |

Answer: 3x + 2

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **16.** | Graph the basic function using a solid line and the transformed function using a dotted line. y = -3 |x|http://angellms.gcu.edu/AngelUploads/Content/47518/_assoc/E12CA94A20AD4040B8242A227BA7CCA2/image%2015%20module%203%20q17.JPG?6119

|  |  |
| --- | --- |
| **20.** | Solve the problemSelect the equation that describes the graph shownhttp://angellms.gcu.edu/AngelUploads/Content/47518/_assoc/E12CA94A20AD4040B8242A227BA7CCA2/image%202%20module%203%20q8.JPG?2522 |
|  |

|  |  |
| --- | --- |
| **A.** | y = (x + 2)2- 4  |
| **B.** | y = (x + 4)2 + 2 |
| **C.** | y = (x - 4)2 + 2  |
| **D.** | y = x2 - 4  |

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