Graph each of the functions and tell if it is a one-to-one. Answer yes or no.

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| 5. | 6. | 7. |
| 8. | 9. | 10. |
| 11. | 12. | 13. |

1. Is the function one-to-one?
2. If yes, state the domain. If no, limit the domain to make f(x) a one-to-one function.
3. Find the range of 
4. Find the domain of 
5. Find the range of 
6. Graph f(x) and label it and graph  and label it.
7. Find the equation of .

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| 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_      1. Show work for finding | 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  e) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  f)    g) Show work for finding |

PRECAL TOPICS REVIEW PACKET #4

a)Is the function one-to-one?

b) If yes, state the domain. If no, limit the domain to make f(x) a one-to-one function.

c) Find the range of 

d)Find the domain of 

e)Find the range of 

1. Graph f(x) and label it and graph  and label it.

g) Find the equation of .

|  |  |
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| a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  c)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  d)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  e)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  f)     1. Show work for finding | a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  e) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  f)    g) Show work for finding |

Give all answers in simplified polynomial form.

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| 14. You have 4000 feet of fencing to create a rectangular pen. Since the pen will be constructed next to a wall, it will only require fencing on three sides. Find a function, A, to represent the area of the pen. |
| 15. You have 1200 feet of fencing to create a rectangular pen. The pen also needs to be separated into three separate regions. Find a function, A, to represent the area of the pen. |
| 16. An open box is made from a rectangular piece of cardboard measuring 35 inches by 45 inches by cutting identical squares from the corners and turning up the sides.  a) Express the volume of the box , V, as a function of the length of the side of the square cut from each corner, x.    b) Find the value of V(4). |
| 17. A discount pass for the opera is $250 and reduces the admission fee to $50.00. Without the pass the cost of admission is $100.   1. Express the total seasonal cost of going to the opera without the pass, f, as a function as the number of times   In a season that you go to the opera.   1. Express the total seasonal cost of going to the opera with the pass, g, as a function as the number of times   In a season that you go to the opera.   1. How many times must you go to opera in a season so the cost is the same? |
| 18. Your parents are investing $30,000 to help you pay for college. They are putting the money into two accounts that pay 0.75% and 0.90% interest.  a) Express the annual interest, I, as a function of the amount of money invested at 0.75%.  b) If the annual interest was $242.25, how much money was invested in each account? |
| 19. You have $6800 invested in two different accounts. In the first account the interest was 3.65%, but the money in the second account suffered a loss of 0.45%.   1. Express the annual interest, I, as a function of the amount of money invested at 0.45%. 2. If the annual interest was $133.40, how much money was invested at each rate? |
| 20. You are choosing between two discount memberships. Plan A has a monthly fee of $10 and you pay 90% of the manufacture’s list price. Plan B has a monthly charge of $25 and you pay 85% of the manufacture’s list price.   1. Express the monthly cost for Plan A, f, as a function of amount you spend in a month, x. 2. Express the monthly cost for Plan B, g, as a function of the amount you spend in a month, x. 3. How much do you need to spend in a month so the cost of the two plans is the same? 4. If you spend $500 in a month, which is the better plan? |