Trig Chapter 3 Practice Test 3

Name _____

Tell whether the following relations are functions or not.

_____ 1. (3, 9) (8, 9) (4, 5) (5, 5)

_____ 2. (-2, 5) (9, 2) (1, -7) (2, -1)

_____ 3. (7, 11) (0, 6) (3, 1) (7, -3)

Let f(x) = -2x + 1 and g(x) = 7x – 1.

_____ 4. Find f(-1)

_____ 5. Find g (-4)

_____ 6. Find f(g(2))

_____ 7. Find g(f(5))

_____ 8. Find f(g(x))

_____ 9. Find g(f(x))

_____ 10. Find f(f(x))

_____ 11. Find g(g(x))

_____ 12. Find f(g(f(x)))

_____ 13. If f(x) = 6x – 1, find the inverse of f(x). [Inverse is $f^{-1}(x)$]

_____ 14. If f(x) = $\frac{2x+4}{7}$, find the inverse of f(x). [Inverse is $f^{-1}(x)$]

In 15-20, determine the domain of the function.

_____ 15. f(x) = $\frac{8x+9}{3x-10}$

_____ 16. f(x) = $2x^2 - 8$

_____ 17. f(x) = $\sqrt{-2x+30}$

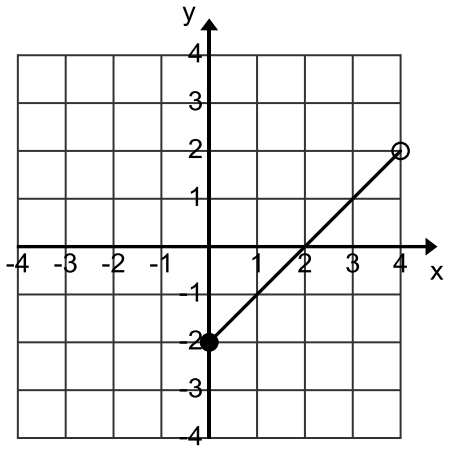
_____ 18. f(x) = $\sqrt{3x-18}$

_____ 19. f(x) = $\frac{3}{x-9}$

_____ 20. f(x) = x – 400

Give the domain and range of each graph below.

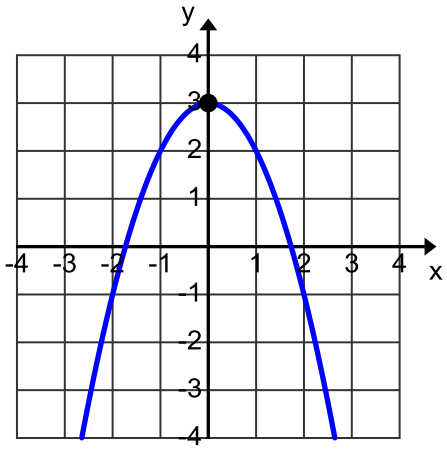
21.



Domain = _____

Range = _____

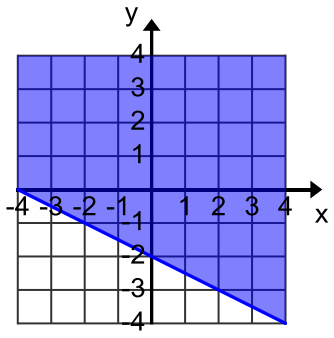
22.



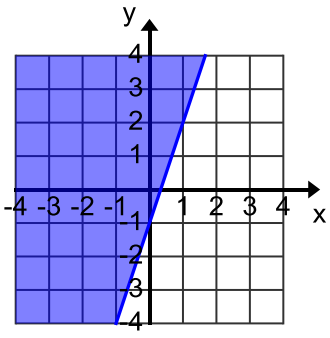
Domain = _____

Range = _____

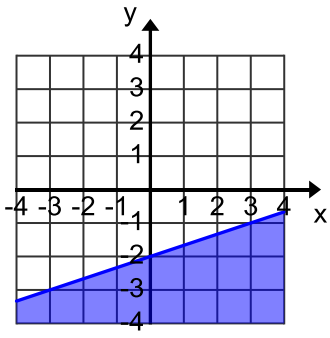
Graph 1



Graph 2



Graph 3



_____ 23. What inequality is graphed in graph 1 above?

_____ 24. What inequality is graphed in graph 2 above?

_____ 25. What inequality is graphed in graph 3 above?

Give the interval notation for the following.

_____ 26. $x < -1$

_____ 27. $-9 < x \leq -4$

_____ 28. $x > -234$

_____ 29. $5 \leq x \leq 20$

_____ 30. $x \leq 0$

_____ 31. $x > -8$