

Trig Chapter 3 Practice Test 1

Name _____

Tell whether the following relations are functions or not.

_____ 1. (2, 3) (3, 4) (4, 5) (5, 6)

_____ 2. (4, 5) (7, 8) (10, -2) (-2, 1)

_____ 3. (-1, 4) (5, 6) (8, 1) (5, -3)

Let $f(x) = 4x - 2$ and $g(x) = x^2$.

_____ 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 $f(x) = 5x - 10$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]

_____ 14. If $f(x) = \frac{x}{3} + 2$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]

In 15-19, determine the domain of the function.

_____ 15. $f(x) = \frac{6}{x-1}$

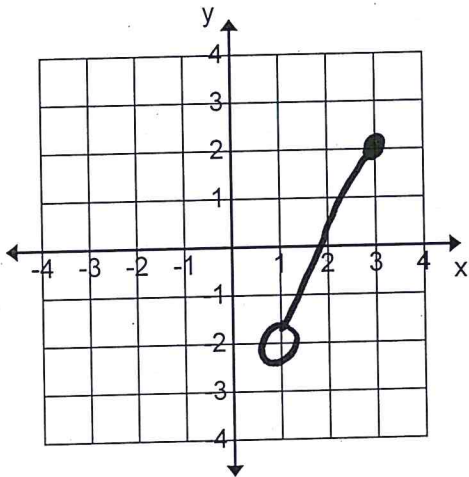
_____ 16. $f(x) = 5x - 10$

_____ 17. $f(x) = \sqrt{x-4}$

_____ 18. $f(x) = \sqrt{2x+20}$

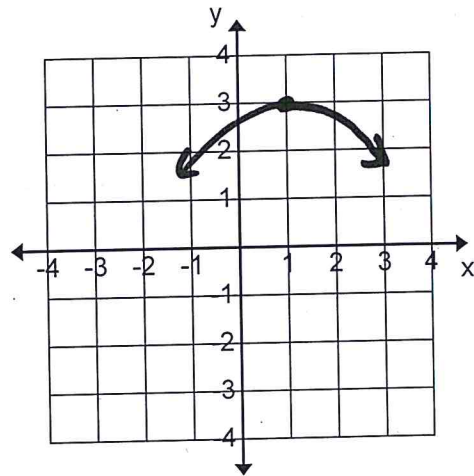
_____ 19. $f(x) = \sqrt{x^2 - 8}$

Give the domain and range of each graph below.



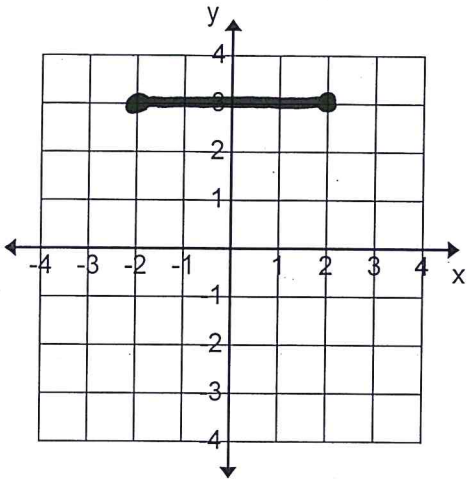
Domain = _____

Range = _____



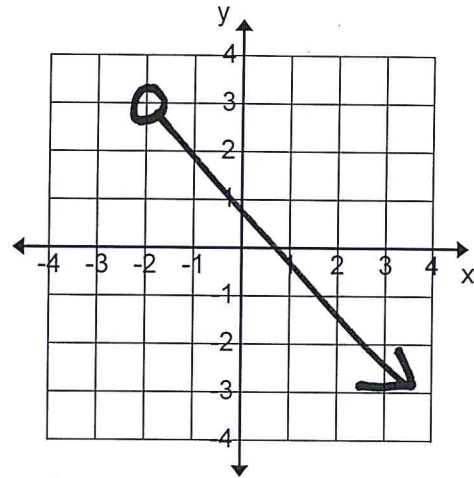
Domain = _____

Range = _____



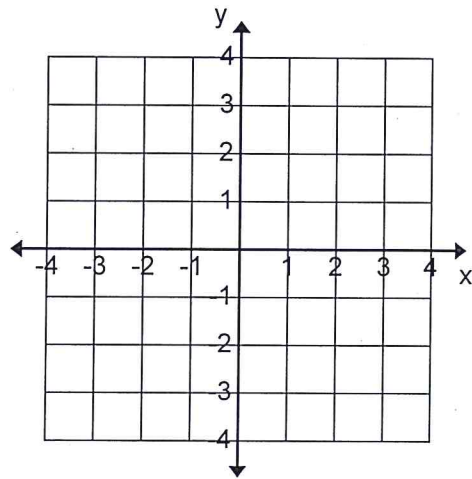
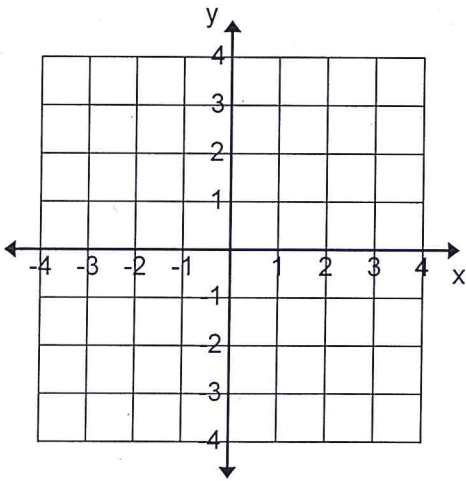
Domain = _____

Range = _____



Domain = _____

Range = _____



Graph the given inequalities on the graphs above.

27. $y > 2x - 1$

28. $y \leq \frac{1}{2}x + 1$

Give the interval notation for the following.

_____ 26. $x < -10$

_____ 27. $-2 < x \leq 2$

_____ 28. $x > -11$

_____ 29. $0 \leq x \leq 10$

_____ 30. $x \leq 0$

_____ 31. $x > 3$