

Algebra II**Relations and Functions, Domain and Range**

State only the domain using interval notation.

1. $f(x) = \frac{7}{x^2 - 4x - 5}$

2. $f(x) = |x + 4|$

3. $f(x) = 8x^3 - 5x + 1$

4. $f(x) = \sqrt{2x - 1}$

5. $f(x) = \frac{3x}{2x^2 - 8x}$

6. $\sqrt[3]{x + 5}$

7. $f(x) = \frac{3}{x^2 + 3x - 18}$

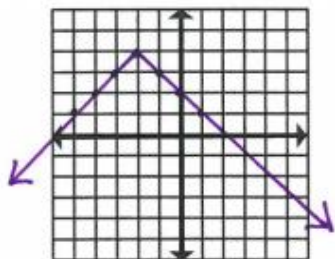
8. $f(x) = \sqrt{x} + 1$

9. $f(x) = \frac{5x^2 - 11}{10x^2 - 19x + 6}$

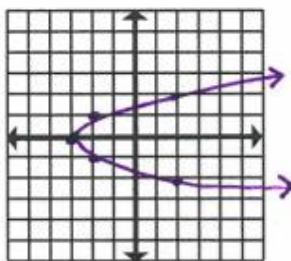
10. $f(x) = \frac{18}{18x^2 - 2}$

State the domain and range using interval notation.

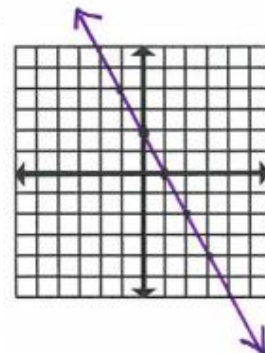
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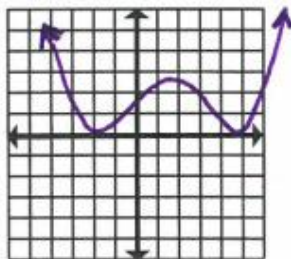
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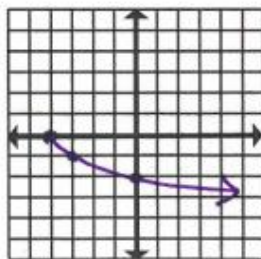
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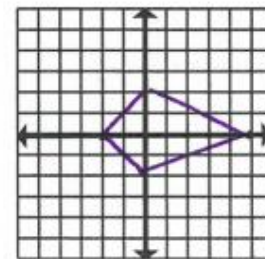
14.



15.



16.



Suppose $f(x) = -3x + 2$ and $g(x) = \frac{1}{2}x - 1$. Find the following.

17. $(f+g)\left(\frac{1}{3}\right)$

18. $(gf)(4)$

19. $\frac{g(-2)}{f(3)}$

20. $(g - f)(-8)$

21. $f(g(x))$

22. $f(x) - g(x)$

23. $(f \circ f^{-1})(-5)$

24. $g^{-1}(x)$