PC 1-2 Practice

Students will review Algebra skills while learning how the structure of a PreCalculus works. Show work.

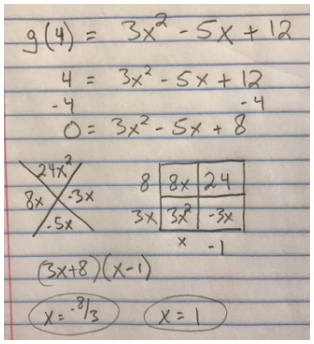
1. Solve for x.

$$3x^2 + 13x + 12 = 0$$

2. **Find the mistake and correct it.**

Suppose $g(x) = 3x^2 - 5x + 12$

Evaluate $g(4)$



3. Solve for x.

$$3x^2 + 27x = 0$$

4. Find the domain of the function algebraically.

$$f(x) = \sqrt{x + 9}$$

5. Find the domain of the function algebraically.

$$g(x) = \frac{5}{x - 5}$$

6. Algebraically find the domain.

$$h(x) = \frac{3x}{x^2 - 25}$$

7. Find the domain of the function algebraically.

$$f(x) = \frac{x}{\sqrt{x - 4}}$$

8. Find the domain of the function algebraically.

$$q(x) = \sqrt{-x - 2}$$

9. Find the domain of the function algebraically.

$$f(x) = \frac{x}{x^2 + 1}$$

10. Given $f(x) = -2x^2 + x - 1$, find $f(x + 1)$

11. The graph of g(x) appears to the right. Use the graph to answer the questions.

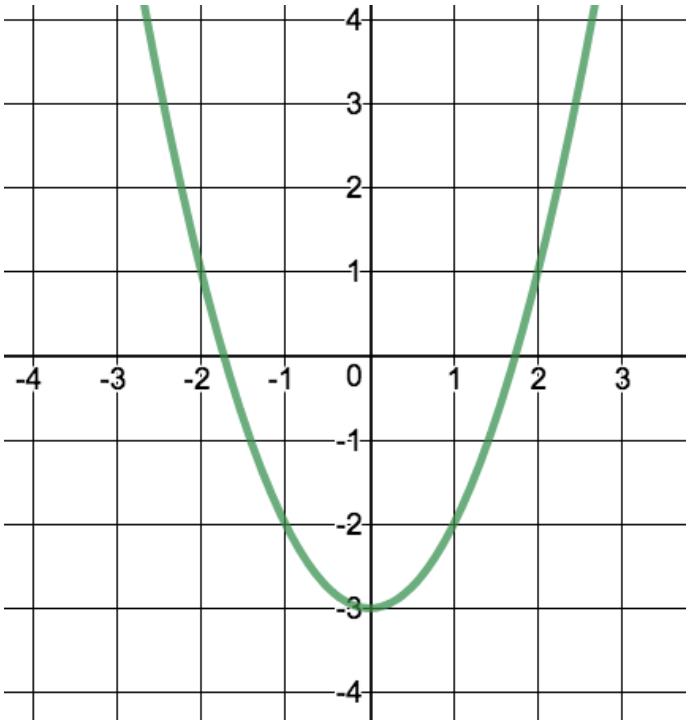
a) Find $g(2)$

b) Find the domain of g(x)

c) Find the range of g(x)

d) Solve $g(x) = -2$

e) Find $g(-1)$



12. The graph of f(x) appears to the right. Use the graph to answer the questions.

a) Find the domain of *f*.

b) Find the range of *f*.

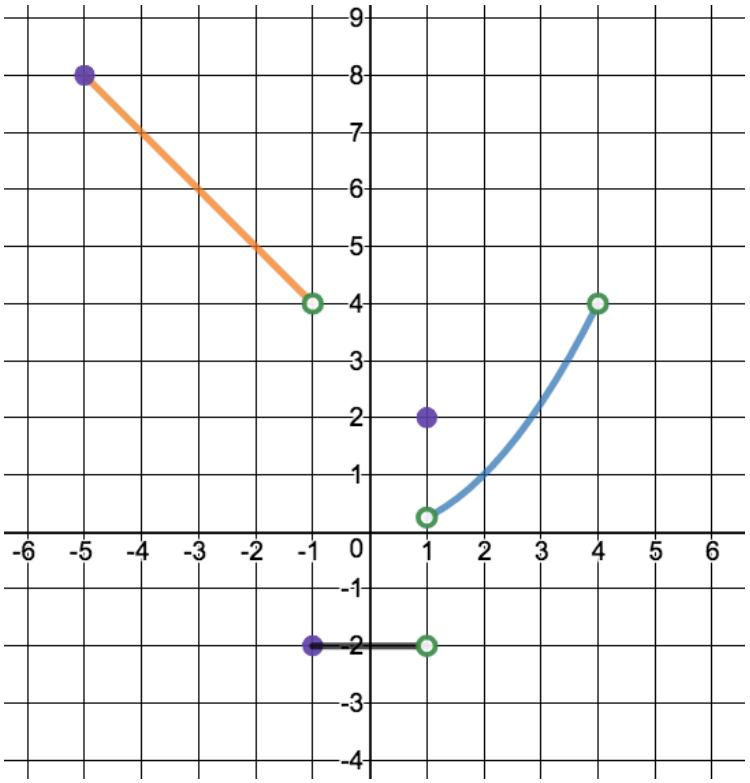
c) Find f(2)

d) Find f(1)

e) Solve $f(x) = 5$

f) Find f(-3)

g) Solve $f(x) = 2$



13. Write the equation of the piecewise function in problem 12.