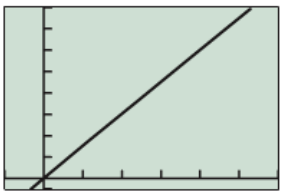
Quiz Review 1.1 - 1.3

Match the numerical model to the corresponding graphical model and algebraic model.

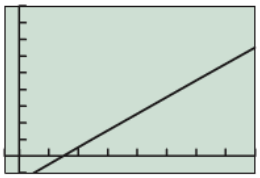
1.1 #2

x	0	1	2	3	4	5
y	2	3	6	11	18	27



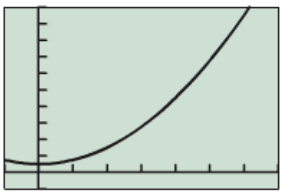
[–3, 18] by [–2, 32]

(d)



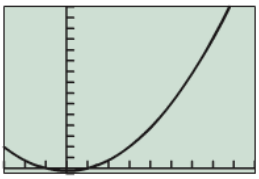
[–1, 16] by [–1, 9]

(g)



[–1, 7] by [–4, 40]

(f)



[–3, 9] by [–2, 60]

(i)

(l) $y = 40 - x^2$

(n) $y = \sqrt{x - 3}$

(p) $y = 3x - 2$

(r) $y = x^2 + 2$

(t) $y = \dfrac{x - 3}{2}$

Quiz Review 1.1 - 1.3

Solve the following equations and confirm your answer graphically

1.1 #29 $v^2 - 5 = 8 - 2v^2$

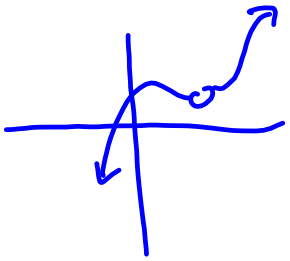
1.1 #31. $2x^2 - 5x + 2 = (x - 3)(x - 2) + 3x$

1.1 #37. $x + 1 - 2\sqrt{x + 4} = 0$

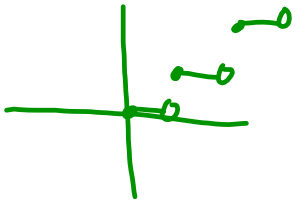
1.1 #38. $\sqrt{x} + x = 1$

Discontinuous

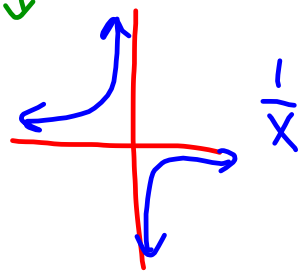
1 Removable
- hole in graph
- cancel out
- pt removed
- doesn't show up on calc



2 Jump



3 Infinite
- asymptotes



Find the domain of the function algebraically.

1.2 #11 $f(x) = \dfrac{3x - 1}{(x + 3)(x - 1)}$

1.2 #14 $h(x) = \dfrac{\sqrt{4 - x}}{x - 3}$

Find the range of the function

1.2 #19 $f(x) = \dfrac{x^2}{1 - x^2}$

Graph the function and tell whether or not it has a point of discontinuity. If there is a point of discontinuity, tell what type it is.

1.2 #22 $h(x) = \frac{x^3 + x}{x}$

1.2 #23 $f(x) = \frac{|x|}{x}$

State whether the function is even, odd or neither. Support graphically and confirm algebraically.

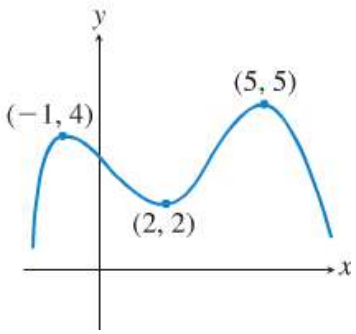
1.2 #47 $f(x) = 2x^4$

1.2 #50 $g(x) = \frac{3}{1 + x^2}$

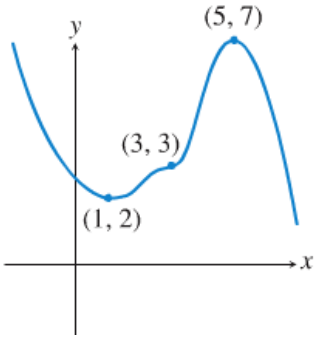
1.2 #52 $g(x) = x^3 + 0.04x^2 + 3$

State whether each labeled point identifies a local min, local max or neither. Identify intervals on which the function is decreasing and increasing.

1.2 #25



1.2 #26



Graph the function and identify intervals on which the function is increasing, decreasing, or constant.

1.2 #29 $f(x) = | x + 2 | - 1$

1.2 #34 $f(x) = x^3 - x^2 - 2x$

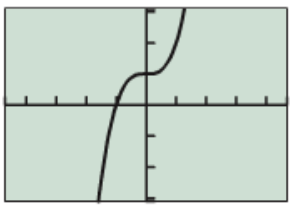
Find all horizontal and vertical asymptotes of the function.

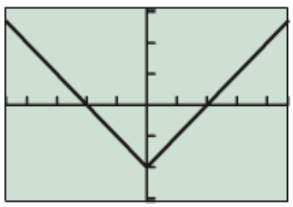
1.2 #59 $f(x) = \frac{x^2 + 2}{x^2 - 1}$

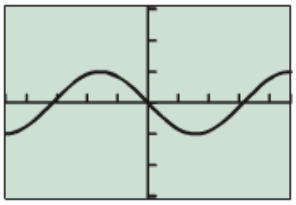
1.2 #62 $h(x) = \frac{2x - 4}{x^2 - 4}$

Below are graphs that are slight variations of the parent functions. Without using your calculator, match each graph to an equation given.

1.3 #1, 2 & 4

1. 

2. 

4. 

(a) $y = -\sin x$ (b) $y = \cos x + 1$ (c) $y = e^x - 2$

(d) $y = (x + 2)^3$ (e) $y = x^3 + 1$ (f) $y = (x - 1)^2$

(g) $y = |x| - 2$ (h) $y = -1/x$ (i) $y = -x$

(j) $y = -\sqrt{x}$ (k) $y = \text{int}(x + 1)$

(l) $y = 2 - 4/(1 + e^{-x})$