Y-Intercepts

Name: _____
Period:

Answer the following problems below.

1) A projectile is launched with an upward velocity of 50 ft/sec and it has an initial height of 35 feet.
   a) Write a function that models its height using this format: $h(t) = -16t^2 + v_0t + h_0$.
   b) Locate the y-intercept of this function and write it as an ordered pair.

2)

x	0	1	–1	2	–2	3
y	–3	–4	0	–3	5	0

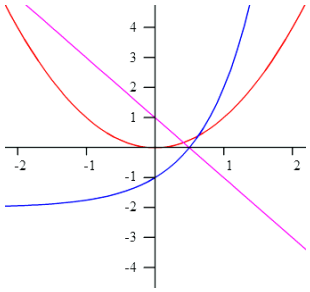
   a) Determine the minimum y-value for this quadratic function.
   b) Locate the y-intercept of this quadratic function.

3) a) Locate the y-intercepts of these functions.
$h_1(t) = -16t^2 + 90t + 40$
$h_2(t) = -16t^2 + 120t + 30$
   b) Which function has the greater y-intercept?

4) a) Determine the equation of the line that contains these points.
   b) Locate the y-intercept of this linear function.

x	**y**
9	2
3	-2
-3	-6
-9	-10

5) What is the y-intercept of the:
   a) exponential function?
   b) linear function?
   c) quadratic function?



Which y-intercept is highest?

6) Locate the y-intercepts of these functions using substitution [let $x = 0$].
   a) $y = 6^x - 2$
   b) $y = -3x + 4$
   c) $y = 13x^2 + 1700x + 500$

7) Locate the y-intercepts of these functions using substitution [let $x = 0$].
   a) $y = -4x^3 + 5x^2 + 17x + 6$
   b) $y = -7|x| + 4$
   c) $y = \frac{x-4}{x+5}$

8) a) Write the equation of the line that has the below table of values.

x	-12	-2	0	4	8
y	9	4	?	1	-1

   b) Locate the y-intercept of this linear function.