KEY

$f(x) = $ ●———●

$g(x) = $ ●– – –●

$h(x) = $ ●–··–··–●

Find the following:

1) $f(-1) + h(7) = -2 + 2 = 0$

2) $g(0) - h(-1) = 2 - (-2) = 4$

3) $f(0) + g(5) + h(-4) = 2 + (-1) + (-2) = -1$

4) $g(7) - f(4) + h(4) = -2 - 2 + 2 = -2$

5)   At what values of x are:
        $f(x) = g(x)$?   0
        $g(x) = h(x)$?   2
        $f(x) = h(x)$?   -1, 4

6)   Where is $f(x) > g(x)$?

        $\{0 < x \leq 7\}$

7)   Where is $g(x) \leq h(x)$?

        $\{2 \leq x \leq 7\}$

8)   Where is $f(x) - h(x)$?
        positive?

                $\{-4 \leq x < 4, x \neq -1\}$ OR
                $\{-4 \leq x < -1$ or $-1 < x < 4|$

9)   The max value of $g(x) - h(x)$

        $g(-4) - h(-4) = 2 - (-2) = 4$

10)   The min value of $f(x) - h(x)$

        $f(7) - h(7) = 0 - 2 = -2$

11)   Where is $h(x) - g(x)$
        negative?

                $\{-4 \leq x < 2\}$