AP Calc AB Selected Ch. P Review problems (Summer Packet)

1) Write the equation of the line with the following characteristics

a) passes through (3, -4) and (5, 2)

b) is a horizontal line with a *y*-intercept at -4	c) is a vertical line that passes through (7, -8)

d) has an *x*-intercept at 5 and a *y*-intercept at -3

e) is parallel to the line $3x + 4y = 7$, passes through the point (-6, 4) and is written in point-slope form

f) is perpendicular to the line $5x - 3y = 0$, passes through the point $\left(\frac{3}{4}, \frac{7}{8}\right)$ and is written in point-slope form

6) Find the value of $\frac{f(x+h)-f(x)}{h}$ for each of the following functions:

a) $f(x) = 3x + 7$

b) $f(x) = 3x^2 - 2x + 1$

c) $f(x) = \frac{6}{x}$

24) State horizontal asymptote(s), vertical asymptote(s) and hole(s) for each of the following:

a) $y = \frac{2x^2-7x-4}{6x^2+7x+2}$

b) $y = \frac{5x^2+20x}{x^3-3x^2-28x}$