Answer on Question #39795 - Math - Algebra

1. Determine the equation of g(x) that results from translating the function f(x)=x-squared +7, upward 13 units.
   2. Determine the equation of g(x) that results from translating the function f(x)=(x+8)squared, to the right 14 units.
   3. Find the x-coorinate of the vertex for f(x)=-5x-squared+7x+3

Solution:

1.

$f(x) = x^2 + 7,\ g(x) = f(x) + 13 = x^2 + 20.$

2.

$g(x) = f(x - 14) = (x + 8 - 14)^2 = (x - 6)^2.$

3.

$x_0 = -\frac{7}{-10} = \frac{7}{10}.$

Answer: 1.$g(x) = x^2 + 20.$

2.$g(x) = (x - 6)^2.$

3. $\frac{7}{10}.$