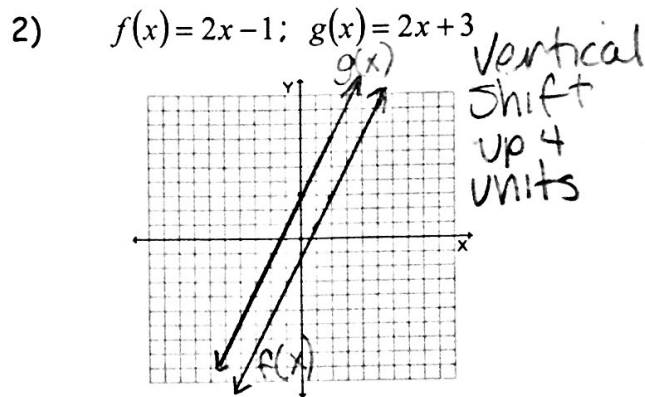
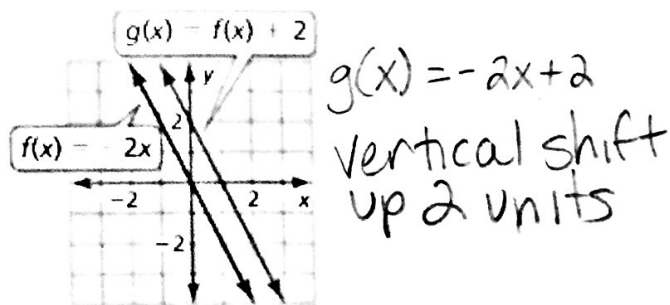
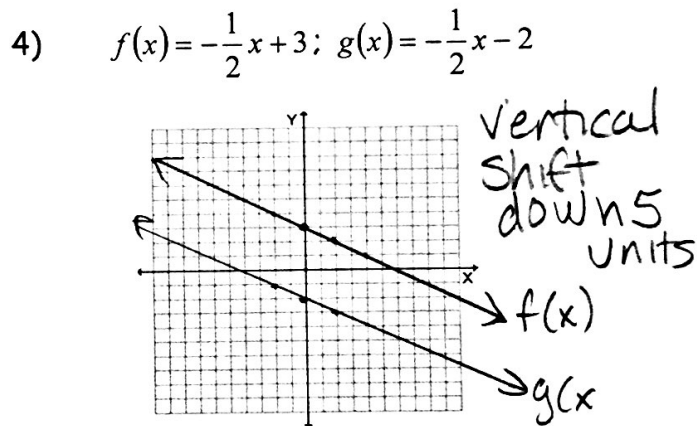
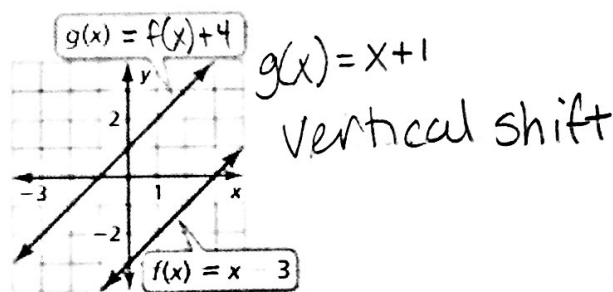


Vertical Translations: Use the graphs of f and g to describe the transformation from the graph of f to the graph of g .

1)

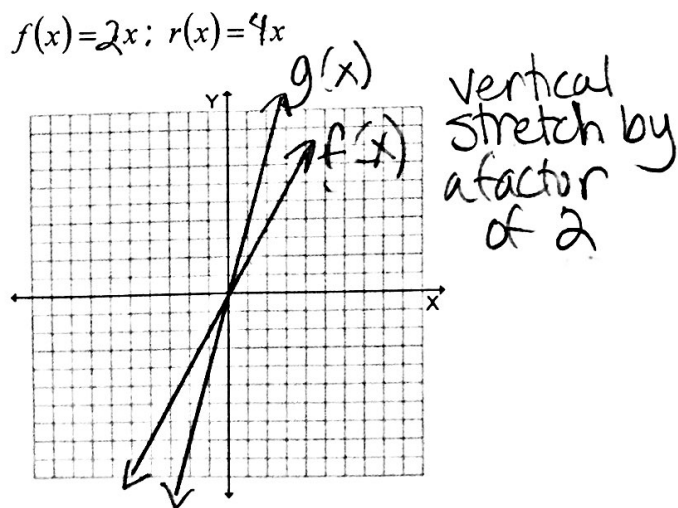


3)

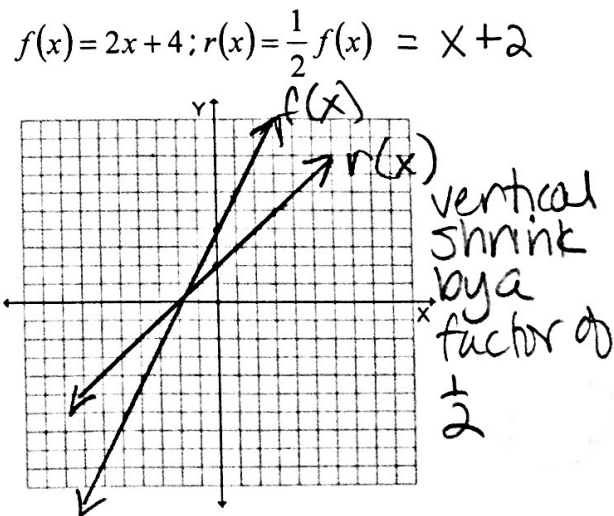


Vertical Stretches or Shrinks: Graph f and r on the same set of axes. Use the graphs of f and r to describe the transformation from the graph of f to the graph of r .

5)



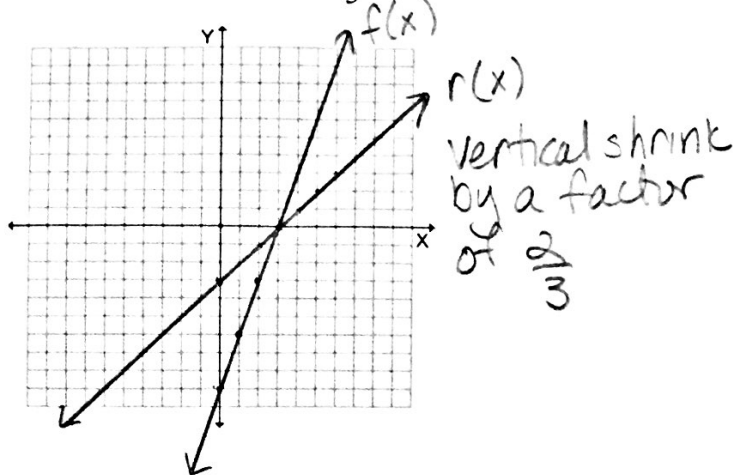
6)



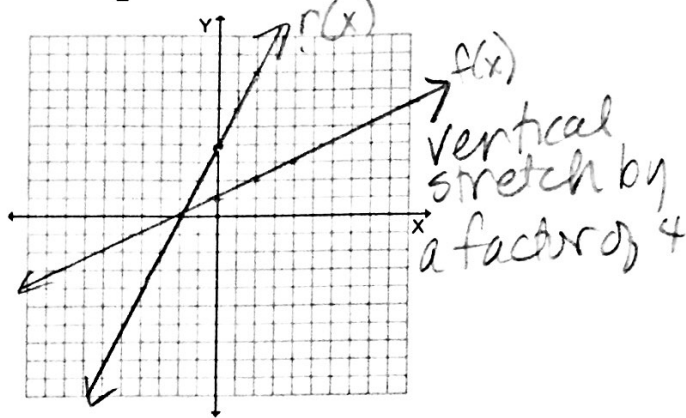
Algebra 1
Section 3.6 Transformations

Name: Key P.2
Date: _____ Hour: _____

7) $f(x) = 3x - 9$; $r(x) = \frac{2}{3}f(x)$

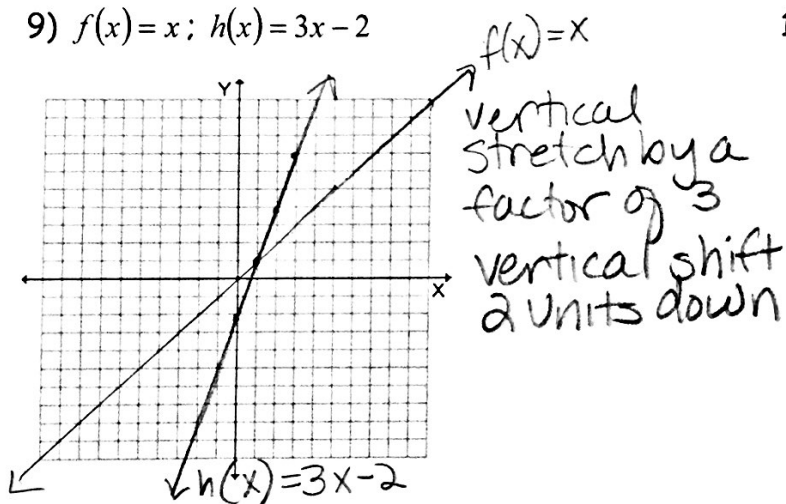


8) $f(x) = \frac{1}{2}x + 1$; $r(x) = 4f(x) = 2x + 4$

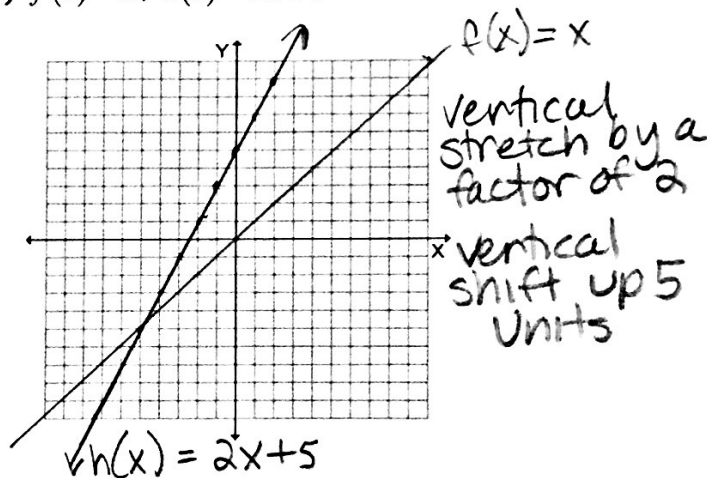


Combining Transformations: Graph f and h . Describe the transformations from the graph of f to the graph of h .

9) $f(x) = x$; $h(x) = 3x - 2$



10) $f(x) = x$; $h(x) = 2x + 5$



Without graphing, describe the transformations from the graph of $f(x) = x$ to $g(x)$.

11) $f(x) = x$; $g(x) = 2x + 1$

Vertical stretch by a factor of 2
Vertical shift 1 unit up

12) $f(x) = x$; $g(x) = 5x - 6$

Vertical stretch by a factor of 5
Vertical shift 6 units down

13) $f(x) = x$; $g(x) = \frac{2}{7}x - 10$

Vertical shrink by a factor of $\frac{2}{7}$
vertical shift 10 units down

14) $f(x) = x$; $g(x) = \frac{3}{2}x + \frac{1}{2}$

Vertical stretch by a factor of $\frac{3}{2}$
vertical shift $\frac{1}{2}$ unit up