Quiz # 4 — 10/2/14

Answer all questions in a clear and concise manner. Remember that answers without explanation or that are poorly presented may not receive full credit.

Calculate the following derivatives. You do not need to simplify your answers.

1.
$$\frac{d}{dx}\frac{5x-2}{2x+5} =$$

2.
$$\frac{d}{dx}\,(2\sqrt{x}-1/x)(1-x^2) =$$

3. Values of f, g and their derivatives at selected points are given in the table.

x	$f(x)$	$f'(x)$	$g(x)$	$g'(x)$
1	-4	2	-3	5
2	-1	-4	2	1
3	4	6	0	-2
4	-3	5	1	7

(a) If $h(x) = x^2\, f(x)$ then $h'(3) =$

(b) If $q(x) = g(x)f(x)$ then $q'(2) =$