$f(x) = x^2 - 7$ $\quad f'(x) = 2x$

x_n	$f(x_n)$	$f'(x_n)$	x_{n+1}	error
$x_1 = 2.5$	-0.75000	5.00000	2.65000	0.15
$x_2 = 2.65000$	$.02250$	5.30000	2.64575	$.00425$
$x_3 = 2.64575$	$.00001$	5.29150	2.64575	0

$|x_{n+1} - x_n| = \text{error}$

$x_{n+1} = 2.50000 - \dfrac{-.75000}{5.00000}$

9.9

$$f(x) = \frac{6}{x^2}; \quad \left(2, \frac{3}{2}\right)$$

$$f'(x) = -2(6)x^{-2-1}$$

$$= -\frac{12}{x^3}$$

$$f'(2) = -\frac{12}{(2)^3} = -\frac{12}{8} = -\frac{3}{2}$$

$$y - \left(\frac{3}{2}\right) = -\frac{3}{2}(x - 2)$$

$$y - \frac{3}{2} = -\frac{3}{2}(x - 2)$$

$$y - \frac{3}{2} = -\frac{3}{2}x + \frac{6}{2}$$

$$+\frac{3}{2} \qquad +\frac{3}{2}$$

$$y = -\frac{3}{2}x + \frac{9}{2}$$