Solve:

1) Find the slope of the tangent line to $y(x) = 3x^2 - 2x - 2$ at the point (-4,54).

$y'(x) = 6x - 2$

$y'(-4) = \boxed{-26}$

2) Find the slope of the tangent line to

$a(x) = \sqrt{x+4}$ at the point (5, 3).

$a'(x) = \frac{1}{2}(x+4)^{-1/2} = \frac{1}{2\sqrt{x+4}}$

$a'(5) = \boxed{\frac{1}{6}}$

3) Find the slope of the tangent line to $g(x) = 3x^3 - 4x^2$ at the point (-1,-7).

$g'(x) = 9x^2 - 8x$

$g'(-1) = \boxed{17}$

4) Find the slope of the tangent line to $n(x) = x^2 - 3x - 2$ at the point (-2,8).

$n'(x) = 2x - 3$

$n'(-2) = \boxed{-7}$

5) Find the slope of the tangent line to $m(x) = -x^3 - 4x^2 - x - 3$ at the point (2,-29).

$m'(x) = -3x^2 - 8x - 1$

$m'(2) = \boxed{-29}$

6) Find the slope of the tangent line to $n(x) = x + 4$ at the point (-3,1).

$n'(x) = 1$

$n'(-3) = \boxed{1}$

7) Find the slope of the tangent line to $b(x) = x^3 - x^2 + 2x - 4$ at the point (0,-4).

$b'(x) = 3x^2 - 2x + 2$

$b'(0) = \boxed{2}$

8) Find the slope of the tangent line to

$m(x) = \frac{4x - 3}{2x + 1}$ at the point (2,1).

$m'(x) = \frac{4(2x+1) - 2(4x-3)}{(2x+1)^2}$

$m'(2) = \frac{20 - 10}{25} = \frac{10}{25} = \boxed{\frac{2}{5}}$

9) Find the slope of the tangent line to $v(x) = -4x^3 + x^2 + 2x + 3$ at the point (3,-90).

$v'(x) = -12x^2 + 2x + 2$

$v'(3) = \boxed{-100}$

10) Find the slope of the tangent line to

$a(x) = \sqrt{x}$ at the point $(2, \sqrt{2})$.

$a'(x) = \frac{1}{2}x^{-1/2} = \frac{1}{2\sqrt{x}}$

$a'(2) = \frac{1}{2\sqrt{2}}$ or $\boxed{\frac{\sqrt{2}}{4}}$