

Corrective Assignment**Find the derivative of the following.**

1. $f(x) = 2\sqrt{1 - 3x}$

2. $f(r) = \sqrt[3]{3r^2 - 2r}$

3. $y = \frac{2}{(5x^2 - 1)^3}$

4. $h(x) = \frac{x^2}{4x - 3}$

5. $f(x) = 2x\sqrt{2x^2 - 3x}$

6. $g(x) = 3x(x^2 - 9)^2$

Write the equation of the tangent line at the point given.

7. $f(x) = (x^2 - 7)^{-2}$ at $x = 3$

Write the equation of the tangent line at the point given.

8. $f(x) = (2x - 1)(3x^2 - 1)^2$ at $x = 0$

9. $f(x) = \frac{3}{\sqrt{4x^2 - 7}}$ at $x = 2$

Find $f'(1)$ given the following.

$g(1) = -1$ and $g'(1) = 2$

$h(1) = 4$ and $h'(1) = 5$

10. $f(x) = (g(x))^3$

11. $f(x) = \sqrt{h(x)}$

Find $f'(-2)$ given the following.

$g(-2) = -3$ and $g'(-2) = 5$

$h(-2) = 1$ and $h'(-2) = -4$

12. $f(x) = (g(x))^2 h(x)$

13. $f(x) = \frac{1}{\sqrt{h(x)}}$

Find $f'(0)$ given the following.

$g(0) = 7$ and $g'(0) = 3$

$h(0) = -2$ and $h'(0) = -8$

14. $f(x) = \left(\frac{h(x)}{g(x)}\right)^2$

15. $f(x) = 2h(x) - g(x)$

ANSWERS TO CORRECTIVE ASSIGNMENT

1. $\frac{-3}{\sqrt{1-3x}}$	2. $\frac{6r-2}{3\sqrt{(3r^2-2r)^2}}$	3. $\frac{-60x}{(5x^2-1)^4}$
4. $\frac{12x^2-6x}{(4x-3)^2}$	5. $\frac{8x^2-9x}{\sqrt{2x^2-3x}}$	6. $3(x^2 - 9)^2 + 12x^2(x^2 - 9)$
7. $y - \frac{1}{4} = -\frac{3}{2}(x - 3)$	8. $y + 1 = 2x$	9. $y - 1 = -\frac{8}{9}(x - 2)$
10. 6	11. $\frac{5}{4}$	12. -66
13. 2	14. $\frac{200}{343}$	15. -19