1) $\frac{dy}{dx} = -10x$

2) $\frac{dy}{dx} = 4x$

3) $\frac{dy}{dx} = 6x - 3$

4) $\frac{dy}{dx} = -8x + 1$

5) $f'(x) = -\frac{20}{x^5}$

6) $\frac{dy}{dx} = -\frac{5}{x^2} - \frac{8}{x^5}$

7) $\frac{dy}{dx} = -\frac{15}{x^6}$

8) $y' = 4x + \frac{8}{3\sqrt[3]{x}} - \frac{12}{x^4}$

9.) $\frac{dy}{dx} = 4x^3 + \frac{4}{3\sqrt[3]{x}}$

10) $\frac{dy}{dx} = 10x + \frac{2}{\sqrt[3]{x}}$

11) $\frac{dy}{dx} = -6x^2 - \frac{15}{x^4}$

12) $f'(x) = 12x^3 + \frac{2}{3\sqrt[3]{x}} + \frac{2}{\sqrt[5]{x^3}}$

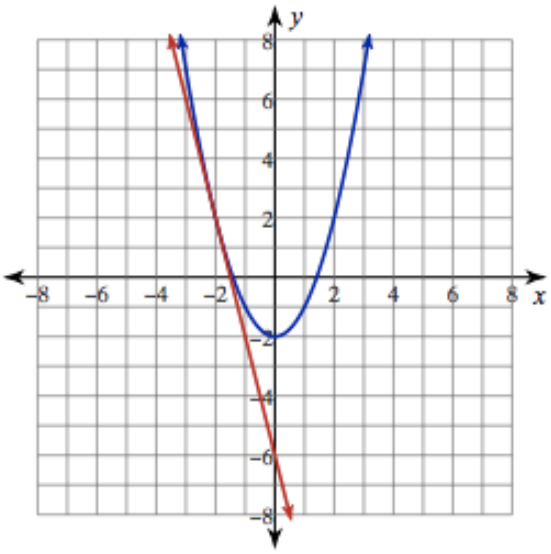
13) $f'(x) = 9x^2 + \frac{1}{3\sqrt[3]{x^2}}$

14.) $\frac{dy}{dx} = 12x^2 - \frac{4}{3\sqrt[3]{x^2}}$

15) $f'(x) = 25x^4 + \frac{1}{\sqrt[4]{x^3}}$

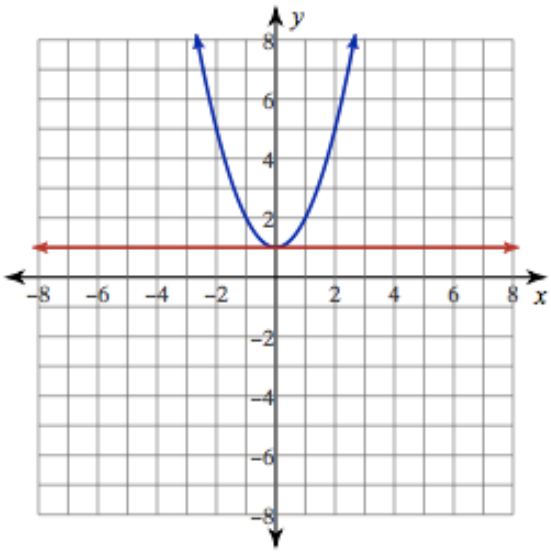
16) $\frac{dy}{dx} = 10x^4 - 16x^3$

17) $y = x^2 - 2;\ (-2, 2)$



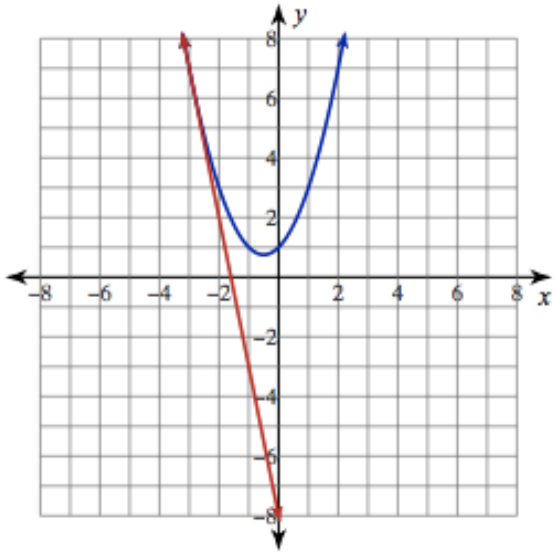
$y = -4x - 6$

18) $y = x^2 + 1;\ (0, 1)$



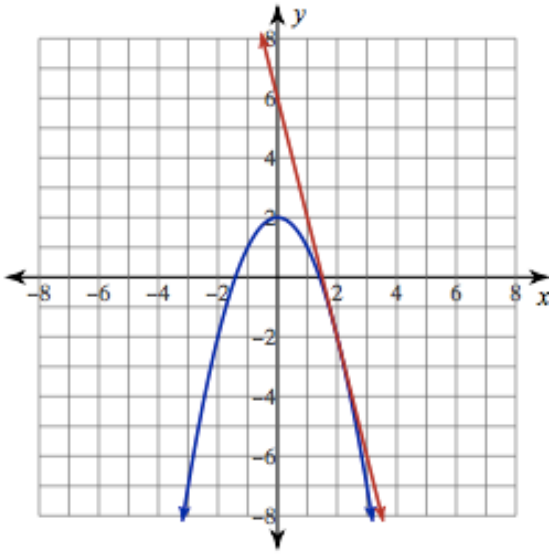
$y = 1$

19) $y = x^2 + x + 1$; $(-3, 7)$



$y = -5x - 8$

20) $y = -x^2 + 2$; $(2, -2)$



$y = -4x + 6$