

12.4 Practice

Find the derivative of each function.

1) $f(x) = 4x^2 - 3$

2) $b(m) = 3m^{\frac{2}{3}} - 2m^{\frac{3}{2}}$

3) $g(t) = -t^2 + 2t + 11$

4) $n(t) = \frac{1}{t} + \frac{3}{t^2} + \frac{2}{t^3} + 4$

5) $m(j) = 14j - 13$

6) $f(x) = 3x^{\frac{1}{2}} - x^{\frac{3}{2}} + 2x^{-\frac{1}{2}}$

7) $v(n) = 5n^2 + 9n - 17$

8) $q(c) = c^9 - 3c^5 + 5c^2 - 3c$

9) $h(c) = c^3 + 2c^2 - c + 5$

10) $f(x) = -5x^3 - 9x^4 + 8x^5$

11) $r(b) = 2b^3 - 10b$

12) $y(f) = -11f$

13) $p(v) = 7v + 4$

14) $z(n) = 2n^2 + 7n$

15) $g(h) = 2h^{\frac{1}{2}} + 6h^{\frac{1}{3}} - 2h^{\frac{3}{2}}$

$$16) j(x) = (2x^2 + 6x)(2x^3 + 5x^2)$$

$$17) m(x) = (x^3 - 6x)(2 - 4x^3)$$

$$18) h(x) = \frac{4x^2}{x^3 + 3}$$

$$19) w(x) = \frac{3x + x^4}{2x^2 + 1}$$

$$20) t(x) = (4x^2 - x)(x^3 - 8x^2 + 12)$$

$$21) r(x) = \frac{\sqrt{x} + 2x}{7x - 4x^2}$$