

Supplementary Questions for 23.6 and 23.7

Differentiate the following:

1. $f(x) = \frac{3x + 8}{x^2 + 4x + 2}$

2. $y = \frac{4}{\sqrt[5]{x^2}}$

3. $f(x) = \frac{4}{x^2} - \frac{3}{x^5}$

4. $s(t) = 3(8t^2 - 7)^6$

5. $y = \frac{\pi^3}{\sqrt{1-3x}}$

6. $y = 9\sqrt[3]{4x^6 + 2}$

7. $f(x) = \frac{2x^2}{\sqrt[5]{1+4x}}$

8. $f(x) = x^3\sqrt{4x+5}$