10.7 EXERCISES

PRACTICE

Use the various rules of differentiation to find the derivative for each of the functions in Exercises 1–20.

1. $f(x) = 4$

2. $f(x) = 3x$

3. $f(x) = 7x - 2$

4. $y = 12$

5. $y = 4x^2$

6. $y = 8x^2$

7. $y = \dfrac{7}{x}$

8. $y = \dfrac{4}{x^5}$

9. $y = \dfrac{1}{2x^3}$

10. $g(x) = \dfrac{4}{3x^2}$

11. $g(x) = 3\sqrt{x}$

12. $h(x) = 2\sqrt[3]{x}$

13. $h(t) = t^{2.3}$

14. $h(t) = t^{-1.4}$

15. $f(x) = 3x^{0.8}$

16. $f(u) = 2u^{0.1}$

17. $f(u) = \dfrac{1}{\sqrt{u}}$

18. $f(x) = \dfrac{2}{\sqrt[4]{x}}$

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

20. $f(x) = 6x^{-\frac{2}{3}}$