$5y + xy$

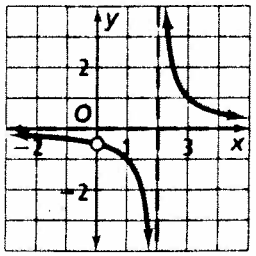
Chapter Test, Form A

1. $y = -\frac{5}{x}$ **2.** $z = \frac{0.5y}{x}$ **3.** direct variation; $y = -2x$

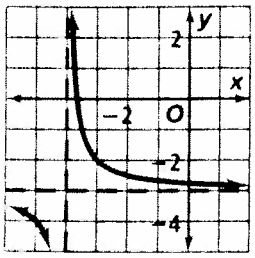
4. inverse variation; $y = \frac{1}{x}$ **5.** $y = \frac{2}{x - 1} - 1$

6. $y = \frac{2}{x - 5} + \frac{1}{2}$ **7.** vertical asymptote, $x = 3$; horizontal asymptote, $y = 1$ **8.** hole at $x = 8$; no vertical asymptote; horizontal asymptote, $y = 2$ **9.** hole at $x = -3$; vertical asymptote, $x = -2$; horizontal asymptote, $y = 0$ **10.** vertical asymptotes, $x = 2$ and $x = 3$; horizontal asymptote, $y = 0$ **11.** vertical asymptote, $x = -4$; horizontal asymptote, $y = -3$ **12.** vertical asymptote, $x = 1$; horizontal asymptote, $y = -2$

13.



14.



15. $\frac{3(x - 2)}{(x - 3)}$; $x \neq 3$ or -2 **16.** $\frac{4}{x}$; $x \neq \frac{1}{2}$ or 0

17. $5(x - 4)(x + 4)$ **18.** $14(x - 2)(x + 5)^2$

19. $\frac{x^2 + 7x - 10}{(x + 5)(x - 5)}$ **20.** $\frac{3x^3 - x^2 + 4}{x^2(x^2 - 4)}$

21. $\frac{x^2(x + 3)}{(x - 1)(x + 2)}$ **22.** $\frac{y^2 + y + 21}{7(y - 1)(y + 1)}$

23. Answers may vary. Sample: A rational expression is in simplest form when its numerator and denominator have no common divisors. **24.** 4 **25.** $\frac{xy + y}{5xy - x}$ **26.** 12 **27.** 13

28. 2 **29.** 0 **30.** 2, 4 **31.** 2 **32.** Answers may vary. Sample: $\frac{3}{4 + x} = \frac{x}{4}$; $-6, 2$ **33.** 1.2 h **34.** not mutually exclusive; $\frac{5}{6}$ **35.** mutually exclusive; 1

36. mutually exclusive; $\frac{2}{3}$ **37.** $\frac{9}{169}$