**39.** 
$$\frac{x(x-18)}{6(5x+2)}$$
,  $x \neq 0$ 

**40.** 
$$\frac{5(15x-2)}{x(x+20)}$$

**41.** 
$$-\frac{3}{4x}, x \neq \frac{5}{2}$$

**42.** 
$$\frac{8x(x+1)}{(5x+3)(x-2)}, x \neq -1, x \neq 0$$

**43.** 
$$\frac{x-4}{12(x-6)(x-1)}, x \neq -1, x \neq 4$$

**44.** 
$$\frac{3x}{4(x-1)}$$
,  $x \neq -2$ ,  $x \neq 2$ 

**46.** 
$$R_t = \frac{R_1 R_2}{R_2 + R_1}, R_1 \neq 0, R_2 \neq 0$$
; about 1474 ohms

57. 
$$1 + \frac{1}{2 + \frac{1}{2 + \frac{1}{2 + \frac{1}{2}}}}, 1 + \frac{1}{2 + \frac{1}{2 + \frac{1}{2 + \frac{1}{2}}}};$$

1.4, about 1.4167, about 1.4138, about 1.4143, about 1.4142;  $\sqrt{2}$