

7.1

1) $\frac{3k^2+30k}{k+10}$

$k + 10 \neq 0$

$\frac{-10}{-10} = \frac{-10}{-10}$

$k \neq -10$

3) $\frac{15n^2}{10n+25}$

$10n + 25 \neq 0$

$\frac{-25}{-25} = \frac{-25}{-25}$

$\frac{10n}{10} \neq \frac{-25}{10}$

$n \neq -\frac{5}{2}$

5) $\frac{10m^2+8m}{10m}$

$\frac{10m}{10} \neq \frac{0}{10}$

$m \neq 0$

7) $\frac{r^2+3r+12}{5r+10}$

$5r + 10 \neq 0$

$\frac{-10}{-10} = \frac{-10}{-10}$

$\frac{5r}{5} \neq \frac{-10}{5}$

$r \neq -2$

9) $\frac{b^2+12b+32}{b^2+4b-32}$

$b^2 + 4b - 32 \neq 0$

$(b + 8)(b - 4) \neq 0$

$b + 8 \neq 0 \quad b - 4 \neq 0$

$\frac{-8}{-8} = \frac{-8}{-8} \quad \frac{+4}{+4} = \frac{+4}{+4}$

$b \neq -8 \quad b \neq 4$

11) $\frac{21x^2}{18x} = \frac{7x}{6}$

13) $\frac{24a}{40a^2} = \frac{3}{5a}$

15) $\frac{32x^3}{8x^4} = \frac{4}{x}$

17) $\frac{18m-24}{60} = \frac{6(3m-4)}{60} = \frac{3m-4}{10}$

19) $\frac{20}{4+2p} = \frac{20}{2(2+p)} = \frac{10}{2+p}$

21) $\frac{x+1}{x^2+8x+7} = \frac{x+1}{(x+7)(x+1)} = \frac{1}{x+7}$

23) $\frac{32x^2}{28x^2+28x} = \frac{32x^2}{28x(x+1)} = \frac{8x}{7(x+1)}$

25) $\frac{n^2+4n-12}{n^2-7n+10} = \frac{(n+6)(n-2)}{(n-5)(n-2)} = \frac{n+6}{n-5}$

27) $\frac{9v+54}{v^2-4v-60} = \frac{9(v+6)}{(v-10)(v+6)} = \frac{9}{v-10}$

29) $\frac{12x^2-42x}{30x^2-42x} = \frac{6x(2x-7)}{6x(5x-7)} = \frac{2x-7}{5x-7}$

31) $\frac{6a-10}{10a+4} = \frac{2(3a-5)}{2(5a+2)} = \frac{3a-5}{5a+2}$

33) $\frac{2n^2+19n-10}{9n+90} = \frac{(2n-1)(n+10)}{9(n+10)} = \frac{2n-1}{9}$

35) $\frac{8m+16}{20m-12} = \frac{8(m+2)}{4(5m-3)} = \frac{2(m+2)}{5m-3}$

37) $\frac{2x^2-10x+8}{3x^2-7x+4} = \frac{2(x-4)(x-1)}{(3x-4)(x-1)} = \frac{2(x-4)}{3x-4}$

39) $\frac{7n^2-32n+16}{4n-16} = \frac{(7n-4)(n-4)}{4(n-4)} = \frac{7n-4}{4}$

41) $\frac{n^2-2n+1}{6n+6} = \frac{(n-1)^2}{6(n+1)}$

43) $\frac{7a^2-26a-45}{6a^2-34a+20} = \frac{(7a+9)(a-5)}{2(3a-2)(a-5)} = \frac{7a+9}{2(3a-2)}$