## Násobení, dělení lomených výrazů, 1. část

### Příklady

**1)** $\dfrac{x+2}{6x}\cdot\dfrac{2x^2}{3x+6}$

**2)** $\dfrac{x+2}{6x}\cdot\dfrac{2x^2-4x}{x^2-4}$

**3)** $\dfrac{3-3x}{1+x}\cdot\dfrac{5+5x}{6x-6}$

**4)** $\dfrac{12x^2}{x^2-6x+9}:\dfrac{3x}{x-3}$

**5)** $\dfrac{\dfrac{2x}{3}}{\dfrac{4x^2}{9y}}=$

**6)** $\dfrac{6x}{\dfrac{15x^2}{4y}}=$

**7)** $\dfrac{\dfrac{x-1}{5x}}{x^2-1}=$

### Řešení

**1)** $\dfrac{x+2}{6x}\cdot\dfrac{2x^2}{3x+6}=\dfrac{x+2}{3}\cdot\dfrac{x}{3(x+2)}=\dfrac{x}{9}$

**2)** $\dfrac{x+2}{6x}\cdot\dfrac{2x^2-4x}{x^2-4}=\dfrac{x+2}{6x}\cdot\dfrac{2x(x-2)}{(x+2)(x-2)}=\dfrac{1}{3}$

**3)** $\dfrac{3-3x}{1+x}\cdot\dfrac{5+5x}{6x-6}=\dfrac{3(1-x)}{1+x}\cdot\dfrac{5(1+x)}{6(x-1)}=\dfrac{1-x}{1}\cdot\dfrac{5}{2(x-1)}=\dfrac{-(x-1)}{1}\cdot\dfrac{5}{2(x-1)}=-\dfrac{5}{2}$

**4)** $\dfrac{12x^2}{x^2-6x+9}:\dfrac{3x}{x-3}=\dfrac{12x^2}{(x-3)^2}\cdot\dfrac{x-3}{3x}=\dfrac{4x}{x-3}\cdot\dfrac{1}{1}=\dfrac{4x}{x-3}$

**5)** $\dfrac{\dfrac{2x}{3}}{\dfrac{4x^2}{9y}}=\dfrac{2x}{3}:\dfrac{4x^2}{9y}=\dfrac{2x}{3}\cdot\dfrac{9y}{4x^2}=\dfrac{1}{1}\cdot\dfrac{3y}{2x}=\dfrac{3y}{2x}$

**6)** $\dfrac{6x}{\dfrac{15x^2}{4y}}=\dfrac{6x}{1}:\dfrac{15x^2}{4y}=\dfrac{6x}{1}\cdot\dfrac{4y}{15x^2}=\dfrac{2}{1}\cdot\dfrac{4y}{5x}=\dfrac{8y}{5x}$

**7)** $\dfrac{\dfrac{x-1}{5x}}{x^2-1}=\dfrac{x-1}{5x}:\dfrac{x^2-1}{1}=\dfrac{x-1}{5x}\cdot\dfrac{1}{(x+1)(x-1)}=\dfrac{1}{5x(x+1)}$