

Mathematik 8		
Rechnen mit Bruchtermen	Lösungen	15.-19. Juni

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$$\begin{aligned}
 \text{g)} \quad & \frac{2x+1}{x+1} \cdot (2x+2)^2 = \\
 & = \frac{(2x+1) \cdot (2x+2) \cdot (2x+2)}{x+1} = \\
 & = \frac{(2x+1) \cdot (2x+2) \cdot 2 \cdot (x+1)}{x+1} = \\
 & = (2x+1) \cdot (2x+2) \cdot 2 = \\
 & = 8x^2 + 8x + 4x + 4 = \\
 & = 8x^2 + 12x + 4
 \end{aligned}$$

$$\begin{aligned}
 \text{h)} \quad & (x-2) : \frac{4-2x}{3x} = \\
 & = (x-2) \cdot \frac{3x}{4-2x} = \\
 & = \frac{(x-2) \cdot 3x}{2 \cdot (2-x)} = \\
 & = \frac{(x-2) \cdot 3x}{2 \cdot (-1) \cdot (x-2)} = \\
 & = \frac{3x}{-2} = -\frac{3x}{2}
 \end{aligned}$$

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$$\begin{aligned}
 \text{a)} \quad & \frac{u}{v} \cdot uv = \\
 & = \frac{u \cdot u \cdot v}{v} = \\
 & = u^2
 \end{aligned}$$

$$\begin{aligned}
 \text{d)} \quad & \frac{4x-3y}{x-2y} : \frac{6y-8x}{y-2x} = \\
 & = \frac{4x-3y}{x-2y} \cdot \frac{y-2x}{6y-8x} = \\
 & = \frac{(4x-3y) \cdot (-1) \cdot (2x-y)}{(x-2y) \cdot (-2) \cdot (4x-3)} = \\
 & = \frac{2x-y}{(x-2y) \cdot 2} = \\
 & = \frac{2x-y}{2x-4y}
 \end{aligned}$$

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$$\begin{aligned}
 \text{f) } \frac{2x-1}{2y} : \frac{4y}{x} &= \\
 &= \frac{2x-1}{2y} \cdot \frac{x}{4y} = \\
 &= \frac{(2x-1) \cdot x}{2y \cdot 4y} = \\
 &= \frac{2x^2-x}{8y^2}
 \end{aligned}$$

$$\begin{aligned}
 \text{h) } \frac{x+y}{2x} : (2x+2y) &= \\
 &= \frac{x+y}{2x} \cdot \frac{1}{2x+2y} = \\
 &= \frac{(x+y) \cdot 1}{2x \cdot 2 \cdot (x+y)} = \\
 &= \frac{1}{4x}
 \end{aligned}$$