

Lösungen:

<p>1</p>	<p>Bitte klammern Sie soweit wie möglich aus</p> <p>a) $60fg - 10gy + 80g^2$ L: $-10g(-6f + y - 8g)$ b) $7mw - 56m$ L: $-7m(-w + 8)$ c) $45hq - 27qu$ L: $-9q(-5h + 3u)$ d) $28jm + 16fj + 48js$ L: $4j(7m + 4f + 12s)$ e) $-5bcw^2 - 50bcw$ L: $-5bcw(w + 10)$ f) $-72nt + 60no - 60n$ L: $-12n(6t - 5o + 5)$ g) $-14bcdg + 28dg$ L: $14dg(-bc + 2)$ h) $-12bcjsw + 36bcj - 156cdj$ L: $-12cj(bsw - 3b + 13d)$ i) $-10adrsx - 4ax$ L: $-2ax(5drs + 2)$</p>
<p>2</p>	<p>Bitte berechnen Sie</p> <p>a) $\frac{\left(-\frac{1}{-5} - \frac{8}{-3}\right) \cdot \frac{-1}{3}}{\left(\frac{-1}{-5} + \frac{1}{-3}\right) \cdot \frac{-4}{5}}$ L: $\frac{-215}{24}$</p> <p>b) $\frac{\left(\frac{-9}{8} - \frac{5}{9}\right) \cdot \left(-\frac{7}{-6} + \frac{4}{-3}\right)}{\left(-\frac{2}{-3} - \frac{4}{5}\right) \cdot \left(\frac{1}{-4} + \frac{-3}{-2}\right)}$ L: $\frac{-121}{72}$</p> <p>c) $\frac{\frac{4}{9} \cdot \frac{-1}{4} \cdot \frac{3}{-7} \cdot \frac{2}{3} \cdot \frac{10}{9} \cdot \frac{7}{9}}{\frac{-4}{-3} \cdot \frac{3}{-4} \cdot \frac{-2}{9} \cdot \frac{5}{-7} \cdot \frac{1}{2} \cdot \frac{3}{2}}$ L: $\frac{-56}{243}$</p>
<p>3</p>	<p>Bitte kürzen Sie soweit wie möglich</p> <p>a) $\frac{-65imz - 20m}{15jm - 10mw + 15m}$ L: $\frac{-65imz - 20m}{15jm - 10mw + 15m} = \frac{-13iz - 4}{3j - 2w + 3}$ [5m]</p> <p>b) $\frac{-22ejrvw - 28jrw}{2jqrvw - 6jrsw - 2jnrw}$ L: $\frac{-22ejrvw - 28jrw}{2jqrvw - 6jrsw - 2jnrw} = \frac{-11ev - 14}{qv - 3s - n}$ [2jrw]</p> <p>c) $\frac{-77bhn^2v^2 + 49bj^2kn^2v - 77bn^2v}{-21bn^2vy^2 - 14bfgn^2r^2v + 98bn^2v}$ L: $\frac{-77bhn^2v^2 + 49bj^2kn^2v - 77bn^2v}{-21bn^2vy^2 - 14bfgn^2r^2v + 98bn^2v} = \frac{-11hv + 7j^2k - 11}{-3y^2 - 2fgr^2 + 14}$ [7bn²v]</p>

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Bitte berechnen Sie

a)

$$\frac{-3k^2 - 11}{-3g^2 + 2r^2 + 11x} + \frac{-2p - o^2}{-3m^2 - 1}$$

$$L: \frac{-3k^2 - 11}{-3g^2 + 2r^2 + 11x} + \frac{-2p - o^2}{-3m^2 - 1} = \frac{9k^2m^2 + 3k^2 + 33m^2 + 11 + 6g^2p + 3g^2o^2 - 4pr^2 - 2o^2r^2 - 22px - 11o^2x}{9g^2m^2 + 3g^2 - 6m^2r^2 - 2r^2 - 33m^2x - 11x}$$

b)

$$\frac{13a + 3}{-11f - 4a + 8} + \frac{7f - 1}{-2f + 5}$$

$$L: \frac{13a + 3}{-11f - 4a + 8} + \frac{7f - 1}{-2f + 5} = \frac{-54af + 69a + 61f + 7 - 77f^2}{22f^2 - 71f + 8af - 20a + 40}$$

c)

$$\frac{-6,4x - 9,7u}{6,7x + 6,3} - \frac{5,4x + 12,9}{10,2x - 1,8u + 14,7}$$

$$L: \frac{-6,4x - 9,7u}{6,7x + 6,3} - \frac{5,4x + 12,9}{10,2x - 1,8u + 14,7} = \frac{-101,46x^2 - 214,53x - 87,42ux + 17,46u^2 - 142,59u - 81,27}{68,34x^2 - 12,06ux + 162,75x - 11,34u + 92,61}$$