

Lösungen:

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Punkte |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>1</b> | <p>Bitte berechnen Sie</p> <p>a) <math>-\frac{5}{4} - \frac{-1}{-6} + \frac{-5}{3} + \frac{-7}{8}</math>   L: <math>-\frac{95}{24}</math></p> <p>b) <math>\frac{28}{15} : \frac{-9}{-2}</math>   L: <math>\frac{56}{135}</math></p> <p>c) <math>\frac{(-\frac{9}{-5} + \frac{3}{2} - \frac{-3}{-8} + \frac{-9}{-8}) * \frac{7}{-5}}{(\frac{3}{-8} + \frac{6}{5} - \frac{7}{-3} - \frac{-1}{6}) * \frac{-1}{-5}}</math>   L: <math>-\frac{162}{19}</math></p> <p>d) <math>\frac{(\frac{9}{-2} + \frac{-9}{-8} + \frac{7}{-8}) * (-\frac{-10}{3} + \frac{7}{-6} + \frac{-8}{3})}{(-\frac{-1}{-8} + \frac{-3}{-2} + \frac{8}{7}) * (\frac{9}{-5} - \frac{5}{-9} - \frac{-7}{-5})}</math>   L: <math>-\frac{15}{47}</math></p> <p>e) <math>\frac{\frac{-1}{-3} * \frac{3}{5} * \frac{3}{5} * \frac{-7}{-3}}{\frac{4}{-5} * \frac{-1}{8} * \frac{-2}{5} * \frac{-7}{10}}</math>   L: <b>10</b></p> | 10     |
| <b>2</b> | <p>Bitte nennen Sie die Bruchrechenregeln, die Sie kennengelernt haben</p> <p><math>\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}</math></p> <p><math>\frac{a}{b} + \frac{c}{d} = \frac{ad+cb}{bd}</math></p> <p><math>\frac{a}{b} - \frac{c}{b} = \frac{a-c}{b}</math></p> <p><math>\frac{a}{b} - \frac{c}{d} = \frac{ad-cb}{bd}</math></p> <p><math>\frac{a}{b} \cdot \frac{c}{d} = \frac{a \cdot c}{b \cdot d}</math></p> <p><math>\frac{a}{b} : \frac{c}{d} = \frac{a}{b} \cdot \frac{d}{c} = \frac{ad}{bc}</math></p>                                                                                                                                                                                                                                                                                                                                                                        | 6      |
| <b>3</b> | <p>Bitte berechnen Sie</p> <p>a) <math>(2b - 7h)(-4u + 7y)(-i - 10c)</math></p> <p>L:<br/> <math>8biu + 80bcu - 14biy - 140bcy - 28hiu - 280chu + 49hiy + 490chy</math></p> <p>b) <math>(-3z + g)(3g - z)(-3z - 4u)</math></p> <p>L:<br/> <math>30gz^2 + 40guz - 9z^3 - 12uz^2 - 9g^2z - 12g^2u</math></p> <p>c) <math>(9e - 11c)(2e - c)</math></p> <p>L:<br/> <math>18e^2 - 31ce + 11c^2</math></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6      |