Test 29.1.2010 **VKE**

Lösungen:

		Punkte
1	Bitte berechnen Sie a) $\frac{-5}{9} - \frac{9}{-5} + \frac{-5}{-9} - \frac{-9}{5}$ | L: $\frac{18}{5}$ b) $\frac{-3}{-10} : \frac{-5}{-8}$ | L: $\frac{12}{25}$ c) $\frac{\left(\frac{3}{-7}+\frac{-2}{-9}+\frac{-2}{7}\right)*\frac{7}{-6}}{\left(-\frac{3}{-5}+\frac{3}{-8}+\frac{3}{-10}\right)*\frac{1}{9}}$ | L: $-\frac{620}{9}$ d) $\frac{\left(\frac{-3}{-10}+\frac{3}{-2}+\frac{-8}{-3}\right)*\left(\frac{1}{-2}+\frac{-9}{10}-\frac{1}{10}\right)}{\left(\frac{-7}{10}-\frac{3}{-10}+\frac{4}{-3}\right)*\left(\frac{-1}{2}-\frac{-9}{4}+\frac{2}{-9}\right)}$ | L: $\frac{54}{65}$ e) $\frac{\frac{7}{-2}*\frac{-5}{6}*\frac{-1}{-2}*\frac{-5}{2}}{\frac{9}{4}*\frac{-5}{2}*\frac{-7}{-2}*\frac{1}{9}}$ | L: $\frac{5}{3}$	10
2	Bitte nennen Sie die Bruchrechenregeln, die Sie kennengelernt haben $\frac{a}{b}+\frac{c}{b}=\frac{a+c}{b}$ $\frac{a}{b}+\frac{c}{d}=\frac{ad+cb}{bd}$ $\frac{a}{b}-\frac{c}{b}=\frac{a-c}{b}$ $\frac{a}{b}-\frac{c}{d}=\frac{ad-cb}{bd}$ $\frac{a}{b}\cdot\frac{c}{d}=\frac{a\cdot c}{b\cdot d}$ $\frac{a}{b}:\frac{c}{d}=\frac{a}{b}\cdot\frac{d}{c}=\frac{ad}{bc}$	6

3 Bitte berechnen Sie 6

a)

$$\frac{3c-5f}{-2d+3t}+\frac{3s-2t}{2q-9y}$$

L :

$$\frac{3c-5f}{-2d+3t}+\frac{3s-2t}{2q-9y}=\frac{6cq-27cy-10fq+45fy-6ds+4dt+9st-6t^2}{-4dq+18dy+6qt-27ty}$$

b)

$$\frac{-5a-6f}{-3w+4u}-\frac{c+4r}{-e-p}$$

L :

$$\frac{-5a-6f}{-3w+4u}-\frac{c+4r}{-e-p}=\frac{5ae+5ap+6ef+6fp+3cw+12rw-4cu-16ru}{3ew+3pw-4eu-4pu}$$

c)

$$\frac{-4f-u}{-u-f}+\frac{-u-7f}{-10f+7u}$$

L :

$$\frac{-4f-u}{-u-f}+\frac{-u-7f}{-10f+7u}=\frac{47f^2-10fu-6u^2}{3fu-7u^2+10f^2}$$