

Lösningsförslag till dugga 1, 20160128

1. (a)

$$\frac{\frac{1}{9} - \frac{1}{2}}{\frac{1}{3} - \frac{7}{18}} = \frac{\frac{2-9}{18}}{\frac{6-7}{18}} = \frac{-7}{-1} = 7.$$

(b)

$$2^6 a^6 \cdot 2^{-4} \cdot a^{-3 \cdot 2} = 4.$$

2.

$$\frac{(a-b)[a-b+a+b]}{2a(a-b)(a+b)} = \frac{1}{(a+b)}.$$

3. (a)

$$\dots \iff 2(x^2 - 2x - 3) = 0 \iff x = 1 \pm \sqrt{1^2 + 3} = 1 \pm 2 \iff \begin{cases} x = x_1 = 3 \\ x = x_2 = -1 \end{cases}$$

(b)

$$f(x) = 2(x-3)(x+1).$$