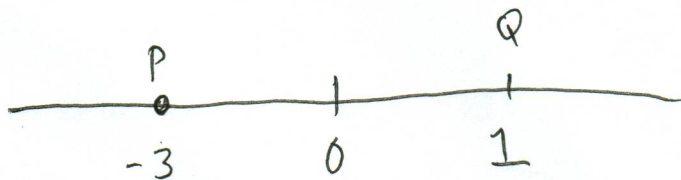


8. (11 points) Add these expressions and simplify: $\frac{4}{x-1} + \frac{2}{x+2}$

$$\begin{aligned} \frac{4(x+2) + 2(x-1)}{(x-1)(x+2)} &= \frac{4x+8+2x-2}{(x-1)(x+2)} \\ &= \frac{6x+6}{x^2-x+2x-2} = \frac{6x+6}{x^2+x-2} \\ &= \frac{6(x+1)}{(x+2)(x-1)} \end{aligned}$$

9. (11 points)

(a) a.) Draw the real line and label the points $P = -3$ and $Q = 1$.



(b) b.) Find the distance from P to Q . That is, evaluate $d(P, Q)$.

$$d(P, Q) = \cancel{\sqrt{(-3)^2 + 1^2}} |Q - P| = |1 - (-3)| = |4| = 4$$