

## Exercises

**5.** Denote the *positive part* function by  $x^+ = x$  if  $x \geq 0$  and  $x^+ = 0$  if  $x \leq 0$ . Set  $r(x, y) = x^+y^+$ . Compute  $\partial_x \partial_y r$ .

**6.** Denote the *Heaviside* function by  $H(\cdot)$ , and set  $S(x, t) = H(t - x)H(t + x)$ . Compute  $(\partial_t^2 - \partial_x^2)S$ .