Exercise 83

Signs of Numbers Let a, b, and c be real numbers such that $a > 0$, $b < 0$, and $c < 0$. Find the sign of each expression.

(a) $-a$ **(b)** bc **(c)** $a - b$ **(d)** $ab + ac$

Solution

Since a is positive, $-a$ is negative.

Since b and c are negative, bc is positive.

Since a is positive and b is negative, $a - b$ is positive.

Since a is positive and b and c are negative, $ab + ac = a(b + c)$ is negative.