



Figure 1: An example for propagating the sign of  $v_1$  to  $v_3$ . During the propagation, all other parents of  $v_3$  (here only  $v_2$ ) are also taken into account. Both  $v_1$  and  $v_2$  are assigned the sign '+' and therefore  $v_3$  receives the two messages '+'  $\otimes$  '+' = '+' and '+'  $\otimes$  '-' = '-', which are then combined using the sign addition operator to obtain '+'  $\oplus$  '-' = '?' as a new sign for  $v_3$ .