



57:AS  
$$\text{rf\_reg}[(\text{DataWidth}-1 \geq 0)?0:\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?0:\text{NUM\_WORDS}-1) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) : ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?0:\text{NUM\_WORDS}-1) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) + ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth})] = 1'sb0;$$

58:AS  
$$\text{rf\_reg}[(\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth} + ((\text{NUM\_WORDS}-1 \geq 1)?\text{NUM\_WORDS}-1:3-\text{NUM\_WORDS}) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) - 1 : (\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}] = \text{rf\_reg\_tmp}[(\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth} + ((\text{NUM\_WORDS}-1 \geq 1)?\text{NUM\_WORDS}-1:3-\text{NUM\_WORDS}) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) - 1 : (\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}];$$

59:AS  
$$\text{rdata\_a\_o} = \text{rf\_reg}[(\text{DataWidth}-1 \geq 0)?0:\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?\text{raddr\_a\_i}:0 - (\text{raddr\_a\_i} - (\text{NUM\_WORDS}-1))) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) : ((\text{DataWidth}-1 \geq 0)?0:\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?\text{raddr\_a\_i}:0 - (\text{raddr\_a\_i} - (\text{NUM\_WORDS}-1))) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) + ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth})];$$

60:AS  
$$\text{rdata\_b\_o} = \text{rf\_reg}[(\text{DataWidth}-1 \geq 0)?0:\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?\text{raddr\_b\_i}:0 - (\text{raddr\_b\_i} - (\text{NUM\_WORDS}-1))) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) : ((\text{DataWidth}-1 \geq 0)?0:\text{DataWidth}-1 + ((\text{NUM\_WORDS}-1 \geq 0)?\text{raddr\_b\_i}:0 - (\text{raddr\_b\_i} - (\text{NUM\_WORDS}-1))) * ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth}) + ((\text{DataWidth}-1 \geq 0)?\text{DataWidth}:2-\text{DataWidth})];$$