

3 MDD construction

Consider 3 variables x_1, x_2 and x_3 having for possible values 1, 2 and 3. Draw MDD_U , the universal MDD (i.e. all combinations are allowed) involving these 3 variables.

Draw MDD₌, the all-equal MDD involving these 3 variables. This MDD contains only the combinations where all the variables take the same value.

How many nodes are in this MDD? How many arcs?

Generalize your answer for the not-all-equal MDD involving n variables and d values

What is the compression factor?

4 To compress or not to compress

Prove that (an example is an admissible answer) when MDD_1 , an MDD, is intersected with another MDD, then the resulting MDD may have more nodes and arcs than MDD_1

Prove that (an example is an admissible answer) when MDD_1 , an MDD, is intersected with another MDD, then the resulting MDD may have less nodes and arcs than MDD_1

Prove that (an example is an admissible answer) when the union of MDD_1 , an MDD, is performed with another MDD, then the resulting MDD may have more nodes and arcs than MDD_1

Prove that (an example is an admissible answer) when the union of MDD_1 , an MDD, is performed with another MDD, then the resulting MDD may have less nodes and arcs than MDD_1
