Abstract Syntax Trees and Evaluation

Write out the abstract syntax tree (AST) corresponding to each of the expressions below:

Expression	AST
8	
8 + 2	
2 + 8	
1 * 2 + 3	
1 * (2 + 3)	
1 + 2 + 3	

Evaluate each of the following ASTs. Show intermediate values in the boxes. The first one has been done for you.

2 (box) → 2 (circle)	□ (box) → 6 (circle)
□ (box) → + with children 2 and 4	□ (box) → * with children 3 and 5
□ (box) → + with children (− of 2 and 1) and 3	□ (box) → − with children 4 and (* of 5 and 6)