

END-OF-SECTION EXERCISES	<p>For problems 9–15: Classify each entry as a mathematical expression (EXP), or a mathematical sentence (SEN).</p> <p>Classify the truth value of each entry that is a sentence: (always) true (T); (always) false (F); or sometimes true/sometimes false (ST/SF). The first two are done for you.</p> <p>(sample) $1 + 2$ EXP (sample) $1 + 2 = 3$ SEN, T</p> <p>9. $\frac{1}{2}$ _____ 10. $x - 1$ _____ 11. $x - 1 = 3$ _____ 12. $1 + 2 + x$ _____ 13. $x \div 3$ _____ 14. $x \div 3 = 2$ _____ 15. $1 + 2 + x = x + 1 + 2$ _____</p> <p>16. Use the English noun ‘Julia’ in three sentences: one that is true, one that is false, and one whose truth cannot be determined without additional information.</p> <p>17. Use the mathematical expression ‘3’ in three sentences: one that is true, one that is false, and one whose truth cannot be determined without additional information.</p> <p>18. Use the mathematical expression ‘x’ in three sentences: one that is always true, one that is always false, and one whose truth cannot be determined without additional information.</p>
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SECTION SUMMARY
THE LANGUAGE OF MATHEMATICS

NEW IN THIS SECTION	HOW TO READ	MEANING
expression		The mathematical analogue of an English noun; a correct arrangement of mathematical symbols used to represent a mathematical object of interest. An expression does NOT state a complete thought; it does not make sense to ask if an expression is true or false. Most common expression types: numbers, sets, functions.
sentence		The mathematical analogue of an English sentence; a correct arrangement of mathematical symbols that states a complete thought. It makes sense to ask if a sentence is true, false, sometimes true/sometimes false.
$x \cdot y$	x times y	a centered dot between numbers (or letters representing numbers) denotes multiplication
simplify an expression		To get a different name for the expression that in some way is simpler: fewer symbols, fewer operations, better suited for current use, preferred style/format.