**Approved Supplemental Mathematics Reference Sheet—Grade 10**

***ONLY*** for use by students on the MCAS Mathematics test who have this accommodation listed in their IEP or 504 plan

| **General Problem-Solving Process** | **Properties** |
| --- | --- |
| 1. Read/reread the problem for understanding.
2. Identify what the question is asking.
3. Make a plan to solve the problem. (*Choose at least one strategy.*)
	* Draw a picture.
	* Create a table, chart, or list.
	* Look for a pattern.
	* Work backwards.
	* Write a number sentence or an equation.
4. Solve the problem.
5. Reread the problem to see if your solution makes sense.
 | *
*
* FOIL

 Properties: Foil Method           (a+b)(c+b)= ac + ad +bc +bd |
| **Fractions** | **Vocabulary** |
|  |  |
| **Divisibility Rules** | **Order of Operations** |
|

| 2 | If the last digit is even |
| --- | --- |
| 3 | If the sum of the digits can be divided by 3 |
| 5 | If the last digit is 0 or 5 |
| 6 | If the number is divisible by both 2 and 3 |
| 9 | If the sum of the digits can be divided by 9 |
| 10 | If the last digit is 0 |

 | **PEMDAS**1. **P**arentheses (brackets, etc.)
2. **E**xponents
3. **M**ultiplication or **D**ivision (left to right)
4. **A**ddition or **S**ubtraction (left to right)
 |
| **GEMA**1. **G**rouping
2. **E**xponents
3. **M**ultiplicative operations (multiplication or division – left to right)
4. **A**dditive operations (addition or subtraction – left to right)
 |

| **Probability** | **Percentages and Proportions** |
| --- | --- |
|  | * if , then
 |
| **Statistics** | **Transformations** |
| * Mean - Average
* Median - Middle
* Mode – Most often
* Range – Least to Greatest
 | * Translation - Slide
* Reflection - Flip
* Rotation - Turn
 |
| **Geometry and Measurement Abbreviations**  | **Symbols** |
|  | * = absolute value of *x*
 |
| **Number Line** |
|  |
| **Angles**  |
| * Complementary 90
 | * Supplementary 180
 |

|  |  |
| --- | --- |
| **General Formulas** | **Coordinate Plane** |
| *
*
 | *
* =
* Midpoint (*M)* =

Coordinate plane |