**Approved Supplemental Mathematics Reference Sheet**

**Grade 4**

 (For use by students on the MCAS Mathematics test who have this accommodation)

|  |  |
| --- | --- |
| **General Problem Solving Strategies** | **Symbols** |
| * Reread question for clarity
* Draw a picture
* Make a table
* Circle or highlight key terms
* Calculate and solve
* See if my answer makes sense
* Circle my answer
 |  is greater than  is less than is equal to |
| **Place Value** | **Divisibility Rules** |
|

|  |  |  |
| --- | --- | --- |
| Whole Numbers |  | Decimals |
| Ht | Tt | Th | H | T | O | . | T | H  |
|  |  |  |  |  |  |  |  |  |

 |

|  |  |
| --- | --- |
| 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 |

 |
| **Number Line** |
| **Number Line** |
| **Hundreds Chart** | **Formulas** |
|

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

 | Area ($A$) of Rectangle $A=l ×w$ ($l=length;w=width$)Area ($A$) Model

|  |  |
| --- | --- |
|  $l$ |  |
| *A* | $$w$$ |

Perimeter ($P$)$P=distance around$  |
| **Fractions** |
| Add or Subtract – need like denominators |

|  |  |
| --- | --- |
| **Time Conversions** | **Metric Conversions** |
| 1 year = 365 days1 day = 24 hours1 hour = 60 minutes1 minute = 60 seconds | 1 kilometer (km) = 1000 meters (m)1 meter (m) = 100 centimeters (cm)1 meter (m) = 1000 millimeters (mm)1 kilogram (kg) = 1000 grams (g)1 liter (L) = 1000 milliliters (mL) |
| **Multiplication Table** |
|

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |  |  |

 |
| **Fraction Bars** |
|  Fractions Bars  |