# RICAS Grade 5
# Approved Supplemental Mathematics Reference Sheet*

## General Problem Solving Strategies

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

## Order of Operations

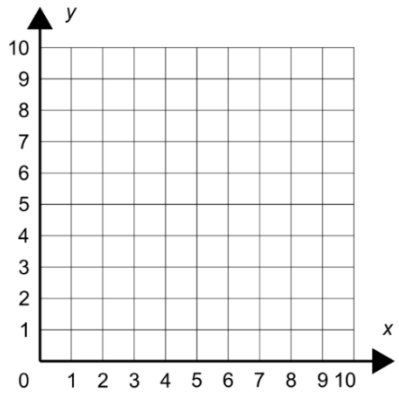
**PEMDAS**

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)

## Coordinate Plane




## Divisibility Rules

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

## Metric Conversions

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)

## Symbols

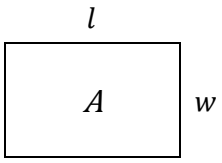
$>$ is greater than
$<$ is less than
$=$ is equal to

## Geometric Measurement

<u>Area ($A$) of Rectangle</u> $A = l \times w$
$(l = length; w = width)$

<u>Perimeter of Rectangle:</u> $P = l + l + w + w$

<u>Area ($A$) Model</u>



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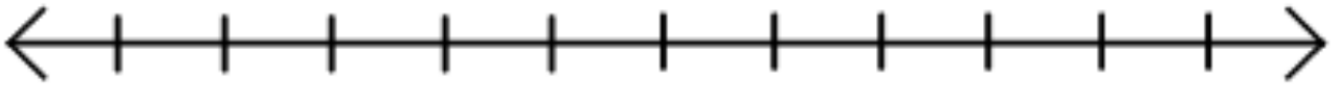
## Place Value

| Whole Numbers | | | | | | | Decimals | | |
|---|---|---|---|---|---|---|---|---|---|
| Hundred-Thousands | Ten-Thousands | Thousands | Hundreds | Tens | Ones | · | Tenths | Hundredths | Thousandths |
| | | | | | | | | | |

## Number Line



## Hundreds Chart

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

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

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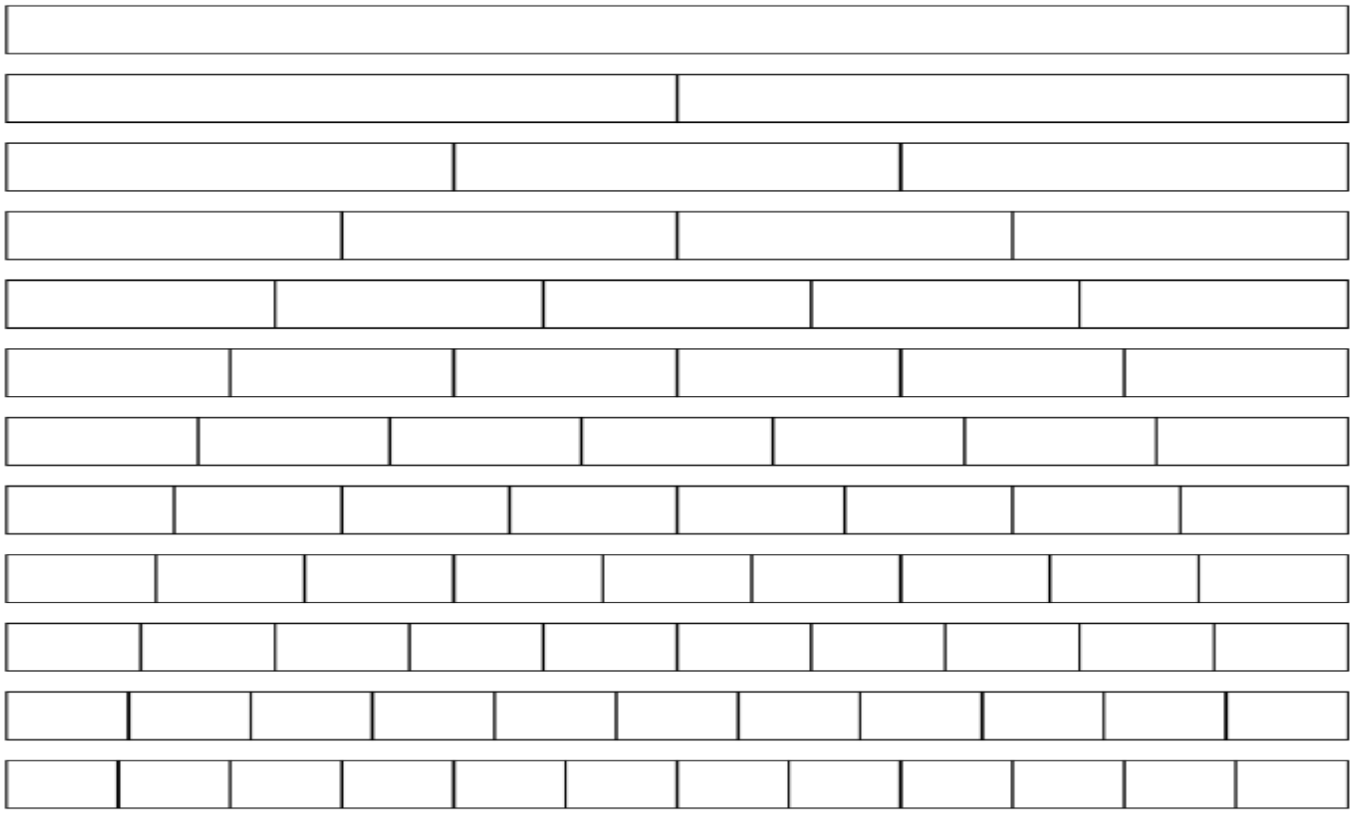
| Fractions Bars (Do NOT complete this table for the student.) |
| --- |
|  |