



**Code:  
RED0050**



# **Math Zone:**

# **Number**

**Challenging math number activities and puzzles  
for students working at intermediate elementary levels.**

**Activities to suit Grades 4-7 students.**

SAMPLE

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

Find answers to the following addition sums and then use the answers to complete the Dot to Dot below.

|                                         |                                        |                                         |                                        |                                        |                                       |
|-----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------|
| <b>A</b><br>234<br>+ 463<br>-----<br>   | <b>B</b><br>1206<br>+ 792<br>-----<br> | <b>C</b><br>3072<br>+ 1342<br>-----<br> | <b>D</b><br>927<br>+ 3542<br>-----<br> | <b>E</b><br>6871<br>+ 497<br>-----<br> | <b>F</b><br>409<br>+ 672<br>-----<br> |
| <b>G</b><br>2302<br>+ 1903<br>-----<br> | <b>H</b><br>589<br>+ 692<br>-----<br>  | <b>I</b><br>1083<br>+ 527<br>-----<br>  | <b>J</b><br>985<br>+ 5213<br>-----<br> | <b>K</b><br>4444<br>+ 777<br>-----<br> | <b>L</b><br>543<br>+ 987<br>-----<br> |

Join the dots in this order (some lines may be gone over twice). All the lines are straight so use a ruler:  
**1530 to 1081 to 4469 to 697 to 1530 to 5221 to 4414 to 1081 to 4469 to 4414 to 5221 to 697 to 1530 to 4205 to 1281 to 1998 to 1610 to 7368 to 6198 to 1281 to 4205 to 1610 to 1998 to 6198 to 7368 to 4205 to end the pattern.**



Name: \_\_\_\_\_

Date: \_\_\_\_\_

- ▶ **Firstly:** Multiply the two numbers inside each square.
- ▶ **Secondly:** Add those products across each row and down each column.
- ▶ **Thirdly:** Add those answers down and across and place those answers in the very last square.
- ▶ **Fourthly:** What do you notice? (Note: You must be correct in all your calculations.)
- ▶ **Fifthly:** It might help to use a calculator for the additions.

|   |   |    |    |   |   |    |    |  |
|---|---|----|----|---|---|----|----|--|
| 6 | 8 | 9  | 7  | 5 | 6 | 2  | 5  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 7 | 3 | 4  | 7  | 9 | 4 | 10 | 6  |  |
| 7 | 4 | 8  | 2  | 6 | 1 | 9  | 6  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 0 | 9 | 8  | 9  | 3 | 4 | 9  | 2  |  |
| 3 | 5 | 7  | 8  | 7 | 3 | 7  | 0  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 5 | 2 | 0  | 10 | 8 | 2 | 9  | 5  |  |
| 6 | 3 | 3  | 5  | 7 | 4 | 7  | 3  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 0 | 1 | 10 | 6  | 3 | 0 | 7  | 6  |  |
| 3 | 8 | 5  | 3  | 9 | 0 | 7  | 6  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 5 | 7 | 8  | 3  | 4 | 8 | 1  | 5  |  |
| 4 | 7 | 8  | 5  | 6 | 7 | 6  | 8  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 3 | 5 | 4  | 8  | 7 | 3 | 4  | 8  |  |
| 4 | 8 | 7  | 1  | 4 | 5 | 5  | 3  |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 3 | 9 | 2  | 6  | 8 | 7 | 10 | 9  |  |
| 5 | 4 | 6  | 8  | 5 | 8 | 2  | 10 |  |
| x | x | x  | x  | x | x | x  | x  |  |
| 8 | 7 | 7  | 3  | 9 | 6 | 6  | 7  |  |
|   |   |    |    |   |   |    |    |  |

Name: \_\_\_\_\_

Date: \_\_\_\_\_

- ▶ **Firstly:** Use a calculator to multiply the two numbers inside each square. (Hint: it would be a good idea to use the Memory function of your calculator to be more efficient.)
- ▶ **Secondly:** Add those products across each row and down each column.
- ▶ **Thirdly:** Add those answers down and across and place those answers in the very last square.
- ▶ **Fourthly:** What do you notice? (Note: You must be correct in all your calculations.)

|    |    |    |    |    |    |    |    |  |
|----|----|----|----|----|----|----|----|--|
| 34 | 57 | 31 | 14 | 14 | 42 | 29 | 9  |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 29 | 13 | 7  | 27 | 57 | 9  | 6  | 13 |  |
| 42 | 13 | 11 | 42 | 45 | 37 | 14 | 31 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 11 | 7  | 25 | 16 | 11 | 29 | 34 | 14 |  |
| 6  | 16 | 42 | 34 | 13 | 31 | 9  | 6  |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 6  | 43 | 6  | 9  | 14 | 42 | 6  | 27 |  |
| 34 | 31 | 11 | 13 | 9  | 42 | 3  | 29 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 11 | 16 | 31 | 2  | 34 | 5  | 14 | 42 |  |
| 14 | 16 | 29 | 25 | 13 | 17 | 7  | 42 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 29 | 57 | 16 | 25 | 11 | 42 | 34 | 31 |  |
| 34 | 29 | 3  | 2  | 29 | 31 | 13 | 29 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 13 | 31 | 16 | 42 | 14 | 9  | 2  | 11 |  |
| 4  | 2  | 42 | 11 | 31 | 9  | 53 | 42 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 13 | 9  | 25 | 34 | 25 | 25 | 14 | 29 |  |
| 14 | 29 | 8  | 31 | 42 | 31 | 4  | 34 |  |
| x  | x  | x  | x  | x  | x  | x  | x  |  |
| 11 | 14 | 57 | 3  | 3  | 14 | 29 | 42 |  |
|    |    |    |    |    |    |    |    |  |

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Juxtaposition means "side by side". Find and mark the sets of juxtaposed numbers along the rows that add up to the number at the start of each row. The numbers at the end of the rows indicated how many possible combinations you can find. There can be **any** number of digits in a set, but numbers are used in only one juxtaposed set – with a few mystery rows (?) to challenge you.

|          |    |    |    |    |              |              |    |    |              |              |              |   |   |
|----------|----|----|----|----|--------------|--------------|----|----|--------------|--------------|--------------|---|---|
| <b>a</b> | 12 | 3  | 6  | 8  | <del>5</del> | <del>7</del> | 2  | 9  | <del>4</del> | <del>2</del> | <del>6</del> | 5 | 2 |
| <b>b</b> | 15 | 6  | 9  | 3  | 5            | 9            | 4  | 7  | 4            | 6            | 8            | 7 | 3 |
| <b>c</b> | 21 | 8  | 9  | 6  | 7            | 7            | 7  | 3  | 6            | 8            | 5            | 8 | 2 |
| <b>d</b> | 16 | 6  | 9  | 5  | 11           | 7            | 8  | 3  | 5            | 9            | 7            | 4 | ? |
| <b>e</b> | 25 | 14 | 17 | 8  | 9            | 15           | 10 | 12 | 6            | 11           | 9            |   | 3 |
| <b>f</b> | 18 | 9  | 6  | 6  | 6            | 8            | 9  | 1  | 5            | 4            | 3            | 6 | 3 |
| <b>g</b> | 30 | 12 | 17 | 8  | 5            | 6            | 7  | 1  | 8            | 11           | 8            | 7 | 2 |
| <b>h</b> | 14 | 3  | 5  | 9  | 1            | 7            | 7  | 2  | 6            | 6            |              |   | ? |
| <b>i</b> | 22 | 15 | 6  | 8  | 14           | 9            | 3  | 7  | 3            | 8            | 2            | 9 | 2 |
| <b>j</b> | 28 | 9  | 14 | 7  | 8            | 13           | 9  | 6  | 7            | 12           | 9            | 7 | ? |
| <b>k</b> | 32 | 7  | 12 | 0  | 13           | 5            | 15 | 14 | 8            | 16           | 0            | 8 | 2 |
| <b>l</b> | 10 | 3  | 6  | 2  | 2            | 7            | 5  | 4  | 1            | 3            | 4            | 3 | 3 |
| <b>m</b> | 38 | 24 | 17 | 7  | 14           | 21           | 25 | 13 | 9            | 19           | 11           | 8 | 3 |
| <b>n</b> | 26 | 14 | 3  | 9  | 15           | 8            | 5  | 9  | 3            | 4            | 2            | 3 | ? |
| <b>o</b> | 34 | 9  | 7  | 12 | 8            | 4            | 3  | 8  | 7            | 9            | 9            | 9 | 2 |
| <b>p</b> | 13 | 7  | 9  | 2  | 6            | 5            | 6  | 0  | 7            | 4            | 9            | 4 | 3 |

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Date: \_\_\_\_\_

Draw lines connecting the common fractions to **two** of their graphic representations and then to their decimal equivalents (see the example given below for  $\frac{1}{2}$ ). In the graphics, the total number of segments represents the **denominator** and the shaded segments show the **numerator**.

On the back of this sheet draw **four** different graphic representations of **five** of the above fractions. Place each set of four in a straight line.  
That is: Common fraction, graphic representation #1, #2, #3 and the equivalent decimal fraction.