




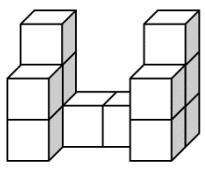

First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	


Problems with Three or More Numbers

Welcome to the Math Challenge #2. Most math problems involve the basic four operations (adding, subtracting, multiplying, and dividing). Word problems become more challenging when they involve three numbers or more. We may have to read the problem multiple times to understand how to solve it. This math challenge will challenge you to be more critical in reading the problems so that you can solve them correctly. Feel free ask adults or siblings if you get stuck.

If you are new to any of the problem solving strategies, check out our complete overview of elementary problem solving strategies at <https://www.mathinaction.org/problem-solving-strategies.html>.

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

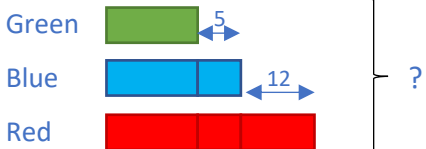
		<i>Answer</i>
1.	<p>Cheryl and Jeremiah each solved three math problems. Pariza solved five math problems. How many total math problems did they solve?</p> <p>$3+3+5 = 11$</p>	<i>11</i>
2.	<p>Ranya is 7 years old and has been taking piano lessons for two years. Before that she took a keyboard for beginner class for a year. How old was she when she started the keyboard for beginner class?</p> <p>Since it has been two years, she must have been 5 years old when she started the piano lesson. A year before that, she must have been $5 - 1$ or 4 years old.</p>	<i>4 [years old]</i>
		
3.	<p>There were 11 cookies on the table. Bianca took two cookies. Sid and Molly each took three cookies. How many cookies are left on the table?</p> <p>$11-2-3-3 = 3$</p>	<i>3 [cookies]</i>
4.	<p>We need to find out how long Anna has done tap dancing lessons. After 2 years of taking ballet lessons, she was 5 years old. Since she is 8 years old now, she must have taken the tap dancing lessons for $8 - 5$ or 3 years.</p>	<i>3 [years]</i>
5.	<p>Dion has $7 + 5 + 3$ or 15 cubes. The picture shows 12 cubes. Therefore, Dion has 3 cubes left unused.</p>	<i>3 [cubes]</i>
		
6.	<p>Cynthia has $9 + 3 = 12$ books The number of books she bought at the yard sale is $21 - 12 = 9$ books.</p>	<i>9 [books]</i>
		

7.  On Saturday, the shop sold = $56 + 115 + 62 = 233$
 On Sunday, the shop sold = $233 - 18 = 215$
 Total flowers sold on Saturday and Sunday = $233 + 215 = 448$

448 [flowers]


8. 9 candy bars cost $\$32 - \$5 = \$27$
 1 candy bars cost = $\$27 \div 9 = \3

$\$3$ [per candy bar]

9.  Green stickers = 30
 Blue stickers = $30+5 = 35$
 Red stickers = $30+5+12 = 47$
 Total = $30+35+47 = 112$

112 [stickers]

10. The number of windows in each floor does not matter, it will take her $209 \div 19$ floors = 11 days to wash all the windows.



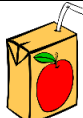
11 [days]

11. Total number of candies = $10 \times 7 + 14 = 84$
 The number of packages that Allyson bought is $84 \div 6 = 14$


14 [packages]

12. Lego pieces  Lego pieces = 132
 Stickers  Stickers = $444 - 132 = 312$
 Cards  Cards = $\frac{1}{4}$ of 312 = 78
 Total Lego pieces and cards = $132 + 78 = 210$

210


13.  Total number of juice boxes = $16 \times 6 = 96$ boxes
 Fraction of the juice boxes consumed at the party = $1 - \frac{5}{8} = \frac{3}{8}$
 The number of juice boxes consumed at the party = $\frac{3}{8} \times 96 = 36$

36 [consumed boxes of juice]

14.  Total number of lollipops = $180 \times 10 + 5 = 1805$
 Number of lollipops in each box = $1805 \div 5 = 361$

361 [lollipops in 1 box]

15. Notice that if they both swim on Day 0, they will both swim again on Day 15. We can make a table to make an organized list below.



Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Melia			X			X			X			X			X
Anya					X					X					X

10 weeks = 70 days
 Melia is at the pool on Day 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69.
 Anya is at the pool on Day 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70.
 They both at the pool on Day 15, 30, 45, and 60 (4 times).

OR 10 weeks = 70 days
 To have them both practice on the same day, it must be a multiple of 3 and 5. Only 15, 30, 45, 60 works, thus 4 times.

4 [times]

16.	<p>Let's pretend that there are all electricians, which means Haru needs to have extra $5 \times \\$105 = \\525.</p> <p>$\\$490 + \\$525 = \\$1015$ for 7 electricians.</p> <p>$\\$1015/7 = \\145 for 1 electrician per day</p>	\$145																									
17.	<p>One way: We can create a table to make an organized list.</p> <table border="1" data-bbox="207 363 846 548"> <tr> <td>Gold</td> <td>2</td> <td>4</td> <td>8</td> <td>16</td> </tr> <tr> <td>Silver</td> <td>18</td> <td>36</td> <td>72</td> <td>144</td> </tr> <tr> <td>Red</td> <td>16</td> <td>32</td> <td>64</td> <td>128</td> </tr> <tr> <td>Green</td> <td>12</td> <td>24</td> <td>48</td> <td>96</td> </tr> <tr> <td>Total</td> <td>48</td> <td>96</td> <td>192</td> <td>384</td> </tr> </table> <p>Another way: We can also think of the information as ratios.</p> <p>Gold : Silver : Red : Green : Total = 2 : 18 : 16 : 12 : 48.</p> <p>If 48 units represent 384, then each unit represents $384/48 = 8$ units.</p> <p>The number of gold tokens (people won) is $8 \times 2 = 16$.</p>	Gold	2	4	8	16	Silver	18	36	72	144	Red	16	32	64	128	Green	12	24	48	96	Total	48	96	192	384	16 [people won]
Gold	2	4	8	16																							
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Green	12	24	48	96																							
Total	48	96	192	384																							
18.	<p>Average of Ananya and Bohan $(43 + 51)/2=47$</p> <p>Average of Ananya and Celia $(43 + 61)/2=52$</p> <p>Average of Bohan and Celia $(51 + 61)/2 = 56$</p> <p>Ananya, Bohan and Celia all guessed an odd number of coins. To get the difference an even number, two numbers that we try (the average and the guessed number) must be odd.</p> <p>$47 - 43 = 4$ off for Ananya</p> <p>$51 - 47 = 4$ off for Bohan</p> <p>$61 - 47 = 14$ off for Celia</p> <p>Only 47 works. There were 47 coins in a jar</p>	47 [coins in a jar]																									

Solution is available on October 23, 2021, at www.mathinaction.org