

Math Challenge #14

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

Hidden Digits and Numbers

Welcome to the Math Challenge #14. In this challenge, we will have fun working on missing digits. Some problems require you to work backward or use your logical reasoning. Once you find the solution, it's a good idea to check whether your answer works. Enjoy!

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.

Answer

<p>1. Find each number covered by each flower.</p> <p>a. + 5 + 2 = 10</p> <p>b. 7 + + 1 = 10</p>	<p>a. =</p> <p>b. =</p>
<p>2. Find each missing number covered by each fruit.</p> <p>a. 1, 3, , 7, 9, , 13, 15.</p> <p>b. 4, 6, , 10, 12, 14, .</p> <p>c. 1, 4, , 10, 13, 16, .</p>	<p>a. = =</p> <p>b. = =</p> <p>c. = =</p>
<p>3. Find each number covered by each fruit. The same numbers are covered by the same fruit.</p> <p>a. + = 10</p> <p style="margin-left: 20px;"> + = 7</p> <p>b. + = 6</p> <p style="margin-left: 20px;">10 - = </p>	<p>a. =</p> <p style="margin-left: 20px;"> =</p> <p>b. =</p> <p style="margin-left: 20px;"> =</p>
<p>4. Find the digit covered by each fruit.</p> <p>a. $\begin{array}{r} 2 \text{ } \\ + \text{ } 2 \\ \hline 71 \end{array}$</p> <p>b. $\begin{array}{r} 5 \text{ } \\ + \text{ } 8 \\ \hline 102 \end{array}$</p>	<p>a. = =</p> <p>b. = =</p>

5. Find each number covered by each fruit. The same numbers are covered by the same fruit.

a. $\begin{matrix} \text{Pineapple} & + & \text{Pineapple} & = & 16 \\ \text{Orange} & + & \text{Pineapple} & = & 11 \end{matrix}$

b. $\begin{matrix} \text{Apple} & + & \text{Apple} & = & 30 \\ 21 & - & \text{Apple} & = & \text{Pear} \\ \text{Pear} & + & \text{Pear} & + & \text{Apple} & = & \text{Watermelon} \end{matrix}$

a. $\begin{matrix} \text{Pineapple} & = & \\ \text{Orange} & = & \\ \text{Pear} & = & \\ \text{Apple} & = & \\ \text{Watermelon} & = & \end{matrix}$

6. Find the digit covered by each fruit.

a.
$$\begin{array}{r} 8 \text{ Apple} \\ - \text{Watermelon} 2 \\ \hline 75 \end{array}$$

b.
$$\begin{array}{r} 52 \text{ Pear} \\ - \text{Orange} 8 \\ \hline \text{Lemon} 30 \end{array}$$

a. $\begin{matrix} \text{Apple} & = & \text{Watermelon} \\ \text{Pear} & = & \text{Orange} \\ \text{Lemon} & = & \end{matrix}$

7. Find the missing digits covered by each flower.

a.
$$\begin{array}{r} \text{Pink Flower} 7 \\ \times \quad 3 \\ \hline 171 \end{array}$$

b.
$$\begin{array}{r} \text{Sunflower} 8 \\ \times \quad \text{Sunflower} \\ \hline 192 \end{array}$$

a. $\begin{matrix} \text{Pink Flower} & = & \\ \text{Sunflower} & = & \end{matrix}$

8. Find the number to replace the question mark.

9. Find the missing digits and solve the following:

a.
$$\begin{array}{r} 5, 87 \text{ Yellow Fish} \\ + 2, \text{Red Fish} 67 \\ \hline 8, 444 \end{array}$$

$\text{Yellow Fish} + \text{Red Fish} = ?$

b.
$$\begin{array}{r} 4, 95 \text{ Purple Fish} \\ + 2, \text{Orange Fish} 61 \\ \hline 7, 418 \end{array}$$

$\text{Orange Fish} + \text{Purple Fish} = ?$

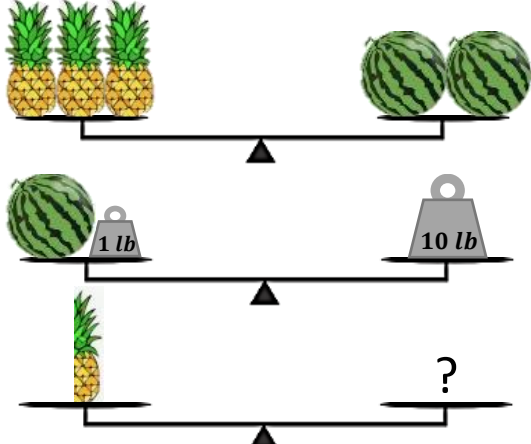
a.
 b.


10. Find the number covered by sunflowers.

$$\begin{array}{r} \text{Pink Flower} + \text{Sunflower} = 55 \\ \text{Pink Flower} - \text{Sunflower} = 45 \end{array}$$

 =

11. Find the weight of half pineapple.





 =

12. Complete the multiplications and find the missing digits covered by each flower.

a.
$$\begin{array}{r} \text{Pink Flower} 54 \\ \times \quad \text{Pink Flower} \\ \hline 3924 \end{array}$$




b.
$$\begin{array}{r} \text{Sunflower} 17 \\ \times \quad \text{Sunflower} \\ \hline 6536 \end{array}$$

 =
 =

13. Complete the multiplications and find the missing digits covered by each fish.

a.
$$\begin{array}{r} 54 \\ \times 3 \text{ Fish} \\ \hline \square \square \square \\ + 1620 \\ \hline \square \square 82 \end{array}$$







b.
$$\begin{array}{r} \text{Fish} 9 \\ \times 4 \text{ Fish} \\ \hline 234 \\ + 1560 \\ \hline \square \square \square \square \end{array}$$

a.  =
b.  =
 =

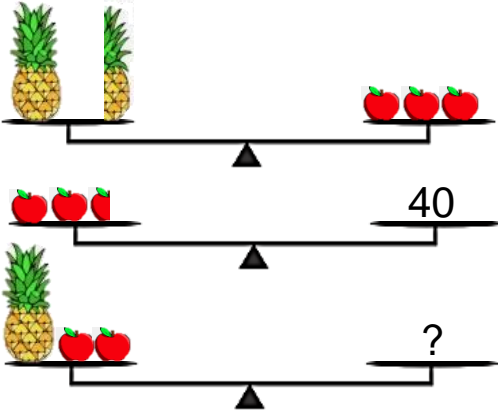
14. Each fish stands for a 1-digit number. Find all possible values of each fish.

a.
$$\begin{array}{r} \text{Blue Fish} \text{ Blue Fish} \\ \times \quad \text{Yellow Fish} \text{ Yellow Fish} \\ \hline \text{Blue Fish} \text{ Blue Fish} \\ \text{Blue Fish} \text{ Blue Fish} \\ \hline \text{Blue Fish} \text{ Yellow Fish} \text{ Blue Fish} \end{array}$$

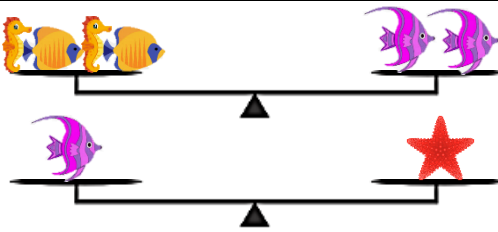
b.
$$\begin{array}{r} \text{Orange Fish} \text{ Orange Fish} \text{ Orange Fish} \\ \times \quad \text{Blue Fish} \text{ Blue Fish} \\ \hline \text{Orange Fish} \text{ Orange Fish} \text{ Orange Fish} \\ \text{Orange Fish} \text{ Orange Fish} \text{ Orange Fish} \\ \hline \text{Orange Fish} \text{ Orange Fish} \text{ Orange Fish} \end{array}$$

a.  =
 =
 =
b.  =
 =
 =

15. Find the number to replace the question mark.



16.



Based on the balances illustrated above, find three of the answers below that will always be true.

a. =

b. =

c. =

d. =

e. =

f. =

Solution is available on May 8, 2020 at <https://www.mathinaction.org/>