

Lesson 10:  
**Finding Missing  
Values**



Warm up



Instruction



Missing  
Values  
Problems



Exit Ticket



Bonus Slides

# Roadmap: toolkit of problem solving strategies

1. Drawing a picture or diagram
2. Making an organized list
3. Making a table
4. Finding a pattern and solving a simpler related problem
5. Guessing and checking
6. Experimenting and acting out
7. Working backwards
8. Logical Reasoning
9. Missing Numbers

# Warm up

MK 2018 #3

Susan is 6 years old. Her sister is one year younger and her brother is one year older. What is the sum of the ages of the three siblings?

# Finding Missing Values

Math Kangaroo problems may require you to deduce values for objects or items. To do this, carefully consider the information given and what additional values you need to determine to find a solution to the question presented.

This can involve comparisons to known values, some numerical calculations, or the use of logic. Some examples are:

- If 3 of an item cost \$24, then one of them will cost one-third, or \$8.
- If a melon weighs twice as much as an apple, then the sum of their weight will be the same as 3 apples.
- Be sure to check your answers!

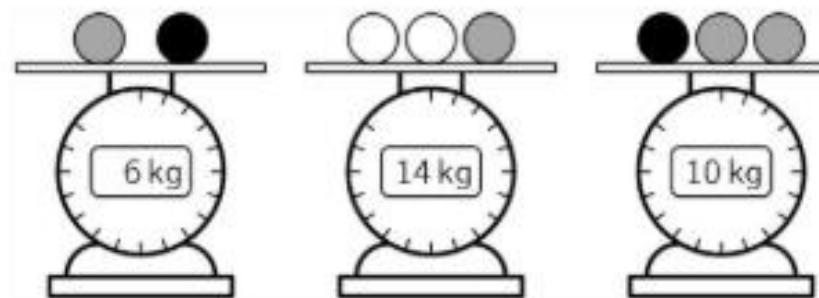
MK 2020 # 3

1. The sum of three numbers is 50. Karin subtracts a secret number from each of these three numbers. She gets 24, 13, and 7 as the results. Which of the following is one of the original three numbers?

- A) 9
- B) 11
- C) 13
- D) 17
- E) 23

MK 2021 #8

2. Rosana has some balls of 3 different colors. Balls of the same color have the same weight. What is the weight of each white ball?

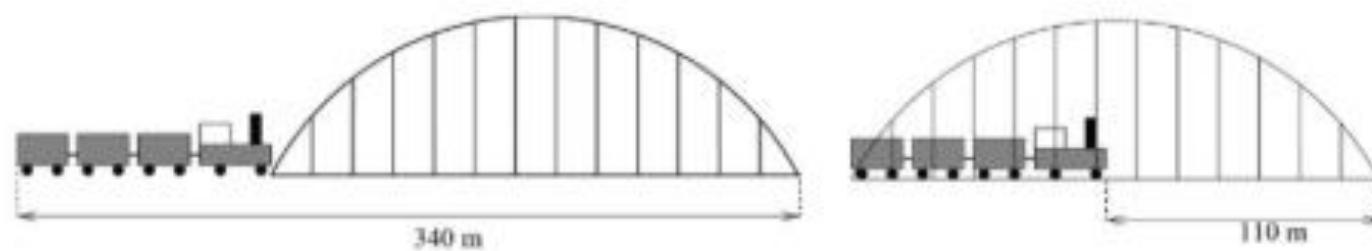


MK 2013 # 14

3. 30 children going to Adventure Park took part in at least one of two events. 15 of them took part in the “moving bridge” contest, and 20 of them went down the zipline. How many children from Adventure Park took part in both events?

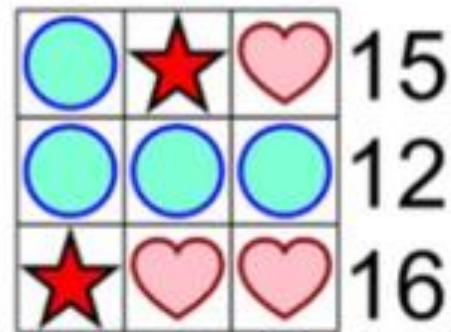
MK 2017 # 18

4. How long is the train?



MK 2019 #17

5. Each shape stands for a different number. The sum of the three numbers in each row is shown to the right of the row. Which number does the star stand for?



MK 2014 # 21

6. Kangaroo Hamish bought some of the toys shown in the picture and gave the cashier 150 Kangcoins. He received 20 Kangcoins back. Then he changed his mind and exchanged one of the toys for another. He got an additional 5 Kangcoins. What toys did Hamish leave the store with?



MK 2006 # 14

7. Four crows are sitting on a fence. Their names are Dana, Hanna, Lena and Bennie. Dana sits exactly in the middle between Hanna and Lena. The distance between Hanna and Dana is the same as the distance between Lena and Bennie. Dana sits 4 feet away from Bennie. How far away is Hanna sitting from Bennie?