

This problem is based on Cuisenaire rods if they are available

Making Trains

The children were using coloured rods of different lengths:



Matt made a train with 4 different coloured rods



Kate made a train the same length but using only white rods
Can you make trains the same length as Matt's but using only rods of one colour?

- Make trains that are the same length as 3 pink rods using different coloured rods
- Make a train the same length as 2 black rods and a light green without using any white rods

Learning and Teaching Objectives

- Use drawings and annotations to help visualise the problem
- Choose and use an appropriate method of recording
- Identify the given information and represent it in another way

Making Trains Solution

Matt's train is 20 units long

- 20×1
- 10×2
- 5×4
- 4×5
- 2×10

3 pink rods = 12 units

- $10 + 2$
- $9 + 3$
- $8 + 4$
- $7 + 5$
- $9 + 2 + 1$
- $8 + 3 + 1$
- $7 + 3 + 2$
- $6 + 5 + 1$
- $6 + 4 + 2 \dots$

2 black rods and a light green = 17 units

- $10 + 7$
- $9 + 8$
- $6 + 6 + 5$
- $5 + 5 + 5 + 2$
- $4 + 4 + 9 \dots$