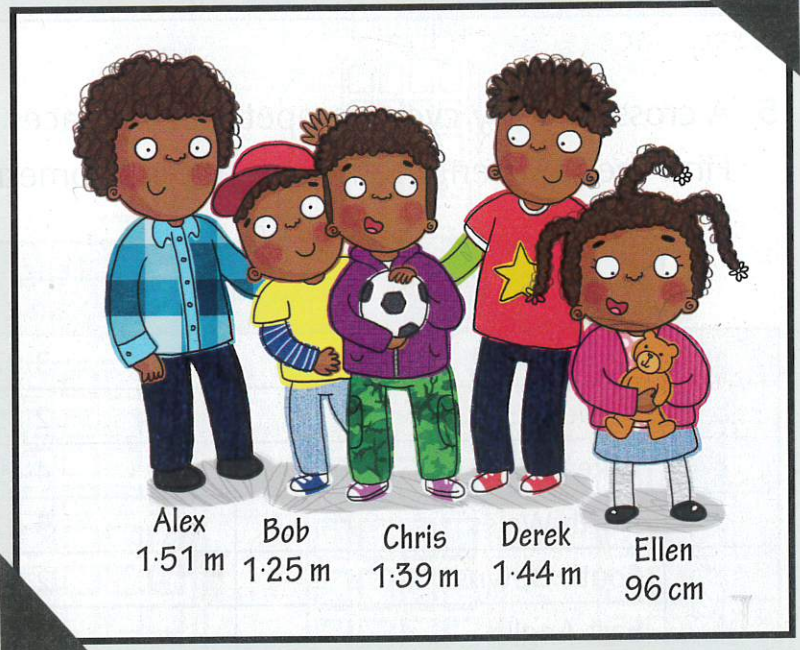# The Kelly family go to the circus

Convert between units of length to solve problems using decimal notation

Challenge 1

This photograph of the Kelly children is for Gran. Alex wrote each of their heights underneath the photo so that Gran could see how tall they all were.

Alex 1·51 m   Bob 1·25 m   Chris 1·39 m   Derek 1·44 m   Ellen 96 cm

1 Find in metres the difference in height between:

   a Alex and Bob

   b Alex and Chris

   c Alex and Derek

   d Alex and Ellen

2 Find, in centimetres, the difference between the tallest and the shortest child.

3 Who is 14 cm taller than Bob?

Challenge 2

1 The Kelly family have tickets for the circus in town. They travel 4·375 km by car to the station 'Park and Ride', 36·83 km by train to town and walk 50 m to the circus.

   a How many kilometres do they travel altogether by car, there and back?

   b How many kilometres is the round trip to and from the circus?

2 The tightrope wire is 21 m from the ground. The rungs on the ladder from the ground to the tightrope platform are at 60 cm intervals. Angelino, the tightrope walker, has climbed to the 15th rung from the ground.

   a What is his height from the ground in metres?

   b How many metres has he still to climb to reach the tightrope platform?

3 Chris Kelly's footprint is 245 mm long. The clown who wears enormous shoes has a footprint 8 times as long. Find the length of the clown's footprint:

  a in centimetres **b** in metres

4 The clown makes his own shoelaces. Each lace is 85 cm long.

  a How many pairs of shoelaces can he make from a 10 m narrow strip of leather?

  b How many centimetres of leather will be left over?
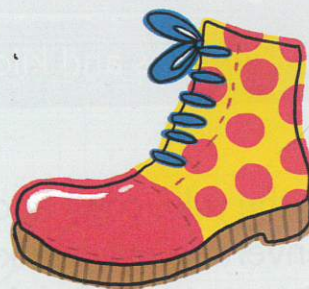
5 Enrico needs some rope to tether the horses. He finds three lengths of rope in each of two boxes. If Enrico takes a length of rope from box A and joins it to one from box B, how many different lengths of combined rope can he make?

A
4·258 m
3·5 m
4·07 m

70 cm
B
55 cm
94 cm
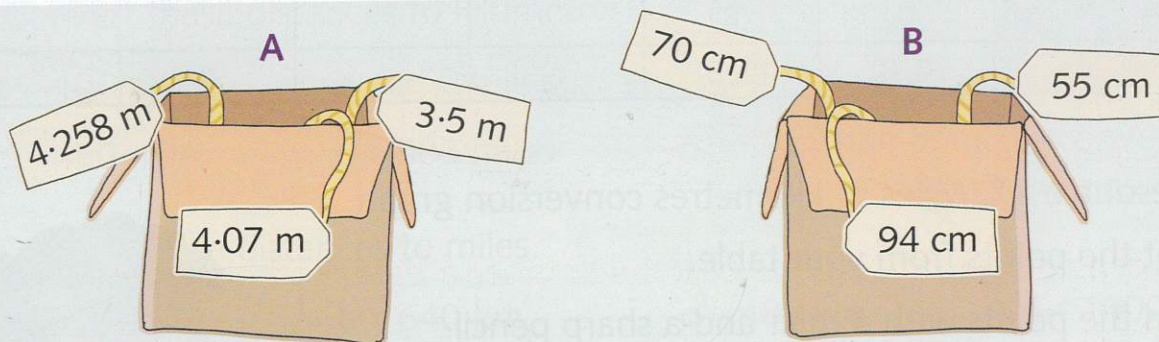
The circus clowns have to ring the bell on top of each box, starting from one end of the double row of boxes, and visiting each bell once only. The clowns may not take any diagonal paths between the bells. The plan shows the distance between each bell.

a Work out the shortest route that a clown could take to ring all the bells.

b Write this shortest distance in metres.

9 m

4·5 m