



## Problem of the Week

### Problem A and Solution

### Going to the Birds

#### Problem

The following table shows some information about some of the world's tallest birds. However, the table is incomplete.

Bird	Average Height (in cm)
Mute Swan	
Ostrich	
King Penguin	92
Andean Condor	
Emu	
Southern Cassowary	155
Wandering Albatross	

- (a) Use the following information about the average heights of these birds to fill in the rest of the table:
- The Andean Condor is 18 cm taller than the King Penguin.
  - The Mute Swan is 55 cm shorter than the Southern Cassowary.
  - The Wandering Albatross is 7 cm taller than the Mute Swan.
  - The Ostrich is 1 m taller than the Andean Condor.
  - The Southern Cassowary is 20 mm taller than the Emu.
- (b) List the birds in order from shortest to tallest.

**Solution**

- (a) Since the Andean Condor is 18 cm taller than the King Penguin, the Andean Condor is  $92 + 18 = 110$  cm tall.

Since the Mute Swan is 55 cm shorter than the Southern Cassowary, the Mute Swan is  $155 - 55 = 100$  cm tall.

Since the Wandering Albatross is 7 cm taller than the Mute Swan, the Wandering Albatross is  $100 + 7 = 107$  cm tall.

Since the Ostrich is 1 m taller than the Andean Condor, and  $1 \text{ m} = 100 \text{ cm}$ , the Ostrich is  $110 + 100 = 210$  cm tall.

Since the Southern Cassowary is 20 mm taller than the Emu, and  $20 \text{ mm} = 2 \text{ cm}$ , the Emu is  $155 - 2 = 153$  cm tall.

The completed version of the table is:

<b>Bird</b>	<b>Average Height (in cm)</b>
Mute Swan	100
Ostrich	210
King Penguin	92
Andean Condor	110
Emu	153
Southern Cassowary	155
Wandering Albatross	107

- (b) We can rank the birds from shortest to tallest using the completed table from part (a). From shortest to tallest, the birds are:  
King Penguin, Mute Swan, Wandering Albatross, Andean Condor, Emu, Southern Cassowary, Ostrich