



Problem of the Week

Problem A and Solution

Delivery Dilemma

Problem

At the beginning of the day, a delivery truck contains 368 packages.
The driver of the truck is making deliveries to various office buildings in a city.

Between 9 a.m. and 10 a.m., they deliver 66 packages.

Between 10 a.m. and 11 a.m., they deliver 103 packages.

Between 11 a.m. and 12 p.m., they deliver 88 packages.

When the driver returns to the depot for a lunch break, 273 packages are added to the truck.

Between 1 p.m. and 2 p.m., they deliver 111 packages.

Between 2 p.m. and 3 p.m., they deliver 86 packages.

At 4 p.m., they have 99 packages left in the truck. How many packages did they deliver between 3 p.m. and 4 p.m.?

Solution

Since they start with 368 packages in the truck, at 10 a.m. they will have
 $368 - 66 = 302$ packages in the truck.

Then at 11 a.m. they will have $302 - 103 = 199$ packages in the truck, and at 12 p.m. they will have $199 - 88 = 111$ packages in the truck.

At lunch they add 273 packages to the truck, so there are now $111 + 273 = 384$ packages in the truck.

Thus, in the afternoon, they start with 384 packages in the truck.

Then at 2 p.m. they will have $384 - 111 = 273$ packages in the truck, and at 3 p.m. they will have $273 - 86 = 187$ packages in the truck.

Since there are 99 packages on the truck at 4 p.m., then there must have been
 $187 - 99 = 88$ packages delivered between 3 p.m. and 4 p.m.