

MATHEMATICS: Problem Solving

- I. A farmer has eleven fields to harvest. The time needed to harvest each of the fields is shown below:

8 7 4 9 6 9 5 5 6 7 8

(All times are in hours)

How many harvesters does the farmer need to hire if the harvesting must be done in 15 hours?

2. In the dungeon that you are exploring, you find five pieces of treasure:

a sword worth 12 gold pieces that weighs 8kg,
a dagger worth 5 gold pieces that weighs 2 kg,
a necklace worth 2 gold pieces that weighs 3 kg
a small chest worth 9 gold pieces that weighs 6kg and
a drinking goblet worth 3 gold pieces that weighs 4 kg.

The problem is that you can only carry 9 kg of treasure with you because of the long climb out of the dungeon.

What will you take with you?

3. Wood is supplied in twelve foot lengths. The carpenter needs the following lengths of wood (all measured in feet):

2 2 3 3 3 3 4 4 4 6 7 7

How many lengths of wood does the carpenter need to buy?
Show how the carpenter should cut up each length. .

4. Here is a map showing the positions of eight towns:



Where would you locate the fire station? Explain clearly why you made your choice.

5. Four guests arrive at a hotel:

Ms Smith wants a double bed and a bathroom
Mr Hussein wants a double bed or a bathroom
Ms McDonald wants a double bed
Mr Lopez wants a single bed and no bathroom

Only five rooms are free. They are:

Room 1 is a single bedroom
Room 2 is a single bedroom with bathroom
Room 3 is a double bedroom
Room 4 is a double bedroom with bathroom
Room 5 is a single bedroom with bathroom

Can you give each guest the room that they want?

Can you still give each guest the room that they want if a fifth guest, Ms Tanna, arrives who wants a single bed with a bathroom?

6. Twenty five people meet, and everybody shakes hands with everybody else. How many handshakes are there?