

**Subject 31**

**PROBLEMS (RATIOS – EQUATIONS)**

*Please do not write on this exam paper and give it back at the end of the test*

**Ex1 :**

To mix concrete you need 4 shovelfuls of sand, 2 shovelfuls of gravel and 1 shovelful of cement. If 56 shovelfuls are put into a mixer, how many would be of gravel?

**Ex2 :**

Dried dog food is available in three sizes:

1 kg bags, which cost £6; 3 kg bags, which cost £15; and 8 kg bags, which cost £25.

What is the smallest number of bags you can buy so that the average price per kg is exactly £4?

**Ex3 :**

Adam, Barney and Joe carry 999 books out of the library.

Adam works for 3 hours, Barney works for 4 hours and Joe works for 5 hours.

They work at different speeds, with Adam carrying 5 books for every 3 books Barney carries and every 2 books Joe carries.

How many books did Adam carry?

**Vocabulary:**

Concrete: béton

Shovelfuls: pelletées

Mixer: bétonneuse