## AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES

SCHOOLS ENRICHMENT CENTRE (AIMSSEC)
AIMING HIGH

## LOADING LORRIES



Twenty one gas cylinders are to be loaded onto three lorries.

Seven cylinders are full, seven are halffull and seven are empty.

A full cylinder weighs 50 kg and an empty cylinder weighs 20 kg .

How should they be loaded onto the lorries so that each lorry is carrying the same weight?

## Can you find more than one answer?

## HELP

| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 kg | 20 kg | 20 kg | 20 kg | 20 kg | 20 kg | 20 kg |


| $1 / 2$ | $1 / 2$ | $1 / 2$ | $1 / 2$ | $1 / 2$ | $1 / 2$ | $1 / 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 kg | 35 kg | 35 kg | 35 kg | 35 kg | 35 kg | 35 kg |


| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 kg | 50 kg | 50 kg | 50 kg | 50 kg | 50 kg | 50 kg |

Cut out the 21 pieces showing the weights of the cylinders and arrange them into 3 sets to load on the 3 lorries so that each set has the same total weight.

## NEXT

Make up a similar problem with a different number of cylinders and different weights or a different number of lorries.

