## LISTING

## NAME:

CLASS:

1. Three friends Rolf, Geof and Billy are sitting in the same row at a concert.

One possible seating arrangement is shown in the table, using the letters R, G and B.
Complete the table to show the other seating arrangements that are possible.

| seat 1 | seat 2 | seat 3 |
| :---: | :---: | :---: |
| example: G | B | R |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

2. A restaurant menu allows a choice of one each of starter, main course and sweet.

The choices are:
Starter
Melon
Soup

Main Course
Pasta
Fish

## Chicken

Sweet
Gateaux
Ice-cream

Jim's choice of soup, fish and ice-cream is shown in the table using the letters S, F and I. Complete the table to show the other combinations that could be chosen.

| Starter | Main Course | Sweet |
| :---: | :---: | :---: |
| example: S | F | I |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

3. A parking 'Pay Machine' takes $\mathbf{£ 2} \mathbf{2} \mathbf{£ 1}$, and $\mathbf{5 0 p}$ coins. John is due to pay a charge of $£ 3.50$ for parking.

One possible combination of coins John could use is shown in the table below.
Complete the table to show the other combinations of coins that could be used.

| $£ 2$ | $£ 1$ | 50 p |
| :---: | :---: | :---: |
| example: 0 | 3 | 1 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

4. Jill is giving change of $\mathbf{8 0}$ pence to a customer.

She has 50p, 20p and 10p coins available.
One possible combination of coins Jill could use is shown in the table below.
Complete the table to show the other combinations of coins that are possible.

| 50p | 20 p | 10 p |
| :---: | :---: | :---: |
| example: 0 | 2 | 4 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

5. Show the ways of making $\mathbf{6 0}$ pence using only $\mathbf{5 0 p}, \mathbf{2 0 p}$, and $\mathbf{1 0 p}$ coins.

| 50 p | 20 p | 10 p |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

6. Perfume can be bought as follows: a $\mathbf{3 0 0}$ gram box
a 200 gram box
a 100 gram box.
Tom wants to buy $\mathbf{7 0 0}$ grams of the perfume.
One possible combination of boxes Tom could buy is shown in the table below.
Complete the table to show the other combinations of boxes that could be bought.

| 300 g | 200 g | 100 g |
| :---: | :---: | :---: |
| example: 0 | 2 | 3 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

7. A transport lorry carries containers with a total weight of $\mathbf{2 0}$ tonnes.

Containers come in three types: container A weighs $\mathbf{5}$ tonnes container $\mathbf{B}$ weighs 4 tonnes container $\mathbf{C}$ weighs $\mathbf{3}$ tonnes.

One possible combination of containers the lorry could carry is shown in the table below. Complete the table to show the other combinations the lorry could carry.

| A (5 tonnes) | B (4 tonnes) | C (3 tonnes) |
| :---: | :---: | :---: |
| example: 0 | 2 | 4 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

8. Prints of photographs can be bought as:
a packet of $\mathbf{2 0}$ photos
a packet of $\mathbf{1 5}$ photos
a packet of $\mathbf{1 0}$ photos.
Karen wants to get $\mathbf{7 5}$ photos printed.
One possible combination of packets Karen could buy is shown in the table below.
Complete the table to show the other combinations of packets that could be bought.

| 20 photos | 15 photos | 10 photos |
| :---: | :---: | :---: |
| example: 0 | 3 | 3 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

9. In a competition darts are thrown at playing cards.

Points are scored as follows:
8 points for hitting an Ace
6 points for hitting a King
5 points for hitting a Queen.
To win, a score of over 17 points is needed using $\mathbf{3}$ darts.
One possible way of winning is shown in the table below.
Complete the table below to show the other ways of winning, including the points scored.

| Ace (8 points) | King (6 points) | Queen (5 points) | points scored |
| :---: | :---: | :---: | :---: |
| example: 1 | 2 | 0 | 20 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## ANSWERS

1. 

| seat 1 | seat 2 | seat 3 |
| :---: | :---: | :---: |
| example: G | B | R |
| G | R | B |
| B | G | R |
| B | R | G |
| R | B | G |
| R | G | B |

2. 

| Starter | Main Course | Sweet |
| :---: | :---: | :---: |
| example: S | F | I |
| M | P | G |
| M | P | I |
| M | F | G |
| M | F | I |
| M | C | G |
| M | C | I |
| S | P | G |
| S | P | I |
| S | F | G |
| S | C | G |
| S | C | I |

3. 

| $£ 2$ | $£ 1$ | 50 p |
| :---: | :---: | :---: |
| example: | 0 | 3 |
| 1 |  |  |
| 0 | 0 | 7 |
| 0 | 1 | 5 |
| 0 | 2 | 3 |
| 1 | 1 | 1 |

4. 

| 50 p | 20 p | 10 p |
| :---: | :---: | :---: |
| example: | 0 | 2 |
| 4 |  |  |
| 0 | 0 | 8 |
| 0 | 1 | 6 |
| 0 | 3 | 2 |
| 0 | 4 | 0 |
| 1 | 1 | 1 |
| 1 | 0 | 3 |

5. 

| 50 p | 20 p | 10 p |
| :---: | :---: | :---: |
| 0 | 0 | 6 |
| 0 | 1 | 4 |
| 0 | 2 | 2 |
| 0 | 3 | 0 |
| 1 | 0 | 1 |

6. 

| 300 g | 200 g | 100 g |
| :---: | :---: | :---: |
| example: | 0 | 2 |
| 3 |  |  |
| 0 | 0 | 7 |
| 0 | 1 | 5 |
| 0 | 3 | 1 |
| 1 | 1 | 2 |
| 1 | 2 | 0 |
| 2 | 0 | 1 |

7. 

| A (5 tonnes) | B (4 tonnes) | $\mathrm{C}(3$ tonnes $)$ |
| :---: | :---: | :---: |
| example: 0 | 2 | 4 |
| 4 | 0 | 0 |
| 2 | 1 | 2 |
| 1 | 3 | 1 |
| 0 | 5 | 0 |

8. 

| 20 photos | 15 photos | 10 photos |
| :---: | :---: | :---: |
| example: 0 | 3 | 3 |
| 3 | 1 | 0 |
| 2 | 1 | 2 |
| 1 | 1 | 4 |
| 0 | 1 | 6 |
| 0 | 5 | 0 |

9. 

| Ace (8 points) | King (6 points) | Queen (5 points) | points scored |
| :---: | :---: | :---: | :---: |
| example: 1 | 2 | 0 | 20 |
| 3 | 0 | 0 | 24 |
| 2 | 1 | 0 | 22 |
| 2 | 0 | 1 | 21 |
| 1 | 1 | 1 | 19 |
| 1 | 0 | 2 | 18 |
| 0 | 3 | 0 | 18 |

