Bounty.com

Highgate School

Entrance examination for entry into Year 7 (11+)

Example Questions

Mathematics

You should read each question very carefully before attempting to answer it. Remember to show clearly all your working.

You should write your answers in the boxes given.

Question 1

Janice wants to buy as many cookies as she can afford with a £10 note. Each cookie costs 70p. How much change will she receive?

Bounty.com

Janice will receive

Question 2

The full price of a car is £12,000. The car is in a sale and its price has been reduced by 35%.

Monique is saving up to buy the car. She already has £7,350. How much more money does she need to buy the car?

Monique needs

Question 3

Florence eats spaghetti every other day. She eats apple pie every three days. Today is Tuesday. Yesterday, which was Monday, she ate both spaghetti and apple pie.

How many times during the next 60 days does she eat both spaghetti and apple pie?

Florence will eat both spaghetti and apple pie ☐ times.

Question 4

120 pupils are sitting an exam. The pupils can choose whether to write in pencil or pen.

Two-fifths of the pupils are boys.
Three-quarters of the boys are writing in pencil.
One-third of the girls are writing in pen.

How many pupils are writing in pencil?

The number of pupils writing in pencil is ☐

Question 5

Tanya cuts out a piece of card into a rectangle. The rectangle is twice as long as it is wide. The area of the rectangle is 128cm^2.

What is the perimeter of the rectangle?

The perimeter of the rectangle is ☐ cm.

Question 6

Robin and Susan are playing a game with nine cards. The cards are numbered from 1 to 9 as shown below.

1	2	3	4	5	6	7	8	9

Robin and Susan take turns to pick up one card each. They keep all the cards that they have picked up so far. The winner is the first player who can make a total of 15 out of the cards in their hand.

Susan starts the first game. She picks the 6 first, and Robin then picks the 3. Next Susan picks the 4, and Robin picks the 5. For her third card, Susan picks the 7, and then Robin picks the 9. Finally, Susan picks the 2.

Susan now has the cards | 2 | 4 | 6 | 7 | in her hand.

Susan wins because she can use three of her cards to make a total of 15:

2 + [redacted] 5.

Bounty.com

Robin starts the second game. After two turns each, Robin is holding the cards numbered 6 and 4, and Susan is holding the cards numbered 2 and 5. It is Robin's turn to pick up a card.

Robin decides to pick up the card numbered 8.

Why do you think this is a good move?

Picking up the card numbered 8 is a good move because

Who will win this game? Explain your answer carefully.

will win this game because