

1

A living room measures 5m by 5m.

Jack buys a new sofa for the room which measures 1m by 3m.

What percentage of the living room floor is taken up by the sofa?

- A** 3% **B** 6% **C** 12% **D** 15% **E** 20%

2

Joseph has the 1 to 8 of clubs from a deck of cards.

The eight cards are shuffled face down.

He selects a card at random.

Outcome A: picks an even number more than 2.

Outcome B: picks a one-digit number.

Outcome C: picks a number less than 7.

Outcome D: picks a multiple of 3.

Outcome E: picks a number more than 4.

Put the five outcomes in order from least likely to most likely.

Which option is correct?

- A** DAECB **B** DEACB **C** ADECB **D** DACEB **E** DEABC

3

Look at the function machine below.



Use this function machine to complete the table below.

In	Out
4	12
12	
	144

- A 36, 48 B 24, 36 C 36, 60 D 48, 60 E 24, 48

4

Look again at the function machine above.

The new function machine must still give the same inputs and outputs.

Replace the two functions with one function.



- A $\times 3$ B $+12$ C $\times 4$ D $+18$ E $\times 6$

For question 5, you have to **write your answer** in the space provided.

5

A bath holds 120 litres of water when half full.

The tap lets out 15 litres of water every minute.

How long does it take to fill the bath completely with water? Write your answer, in seconds, in the space below.

_____ seconds

Read the **whole** passage carefully, then answer the questions that follow.

Climbing Half Dome

1. Pete's mouth dropped open when he first saw the mountain he was supposed to climb. The
2. tall, grey, granite mountain known as "Half Dome" looked like half of a giant hard-boiled egg.
3. The mountain towered majestically over a river valley filled with evergreen trees. Half Dome
4. was covered in snow that day, which would add to the difficulty and danger of climbing it.
5. "Let's go!" said Pete's friend Lisa, adjusting her backpack as she started along the trail. Pete
6. wondered if it was really safe to climb the face of the mountain. They had spent half an hour
7. walking toward Half Dome. As they approached, the mountain seemed to stretch and
8. disappear into the clouds. It was even larger up close than he had thought. "I'm not sure about
9. this," Pete said, letting his fear show.
10. "Come on, don't worry!" Lisa called from a few paces ahead of him. "It won't be as scary as it
11. looks." She smiled and waited for Pete to catch up.
12. Finally, at the mountain's base, Pete saw a thin but strong looking cable stretching up the side
13. of the rock. Climbers were using footholds—boards bolted into the granite—and holding on to
14. the cable to pull themselves along. Lisa grabbed the cable and grinned. "Ready, Pete?" she
15. asked. The cable stretched hundreds of feet above him. "I can't wait!" Pete replied excitedly.

For these questions you have to **write your answers**, neatly, in the boxes provided.

1

Look at lines 1–4. Name two things that made Half Dome difficult or dangerous to climb, according to the text.

2

Look at lines 5–9. What does Pete's behaviour suggest about his character? Give one detail from the text to support your answer.

3 Look at line 3. What does the word “majestically” suggest about how the mountain appeared?

4 Which one part of speech are the following words as they appear in the passage?
over (line 3), **into** (line 8), **up** (line 12), **above** (line 15)

5 Which part of speech is ‘excitedly’ as it appears in the passage? (line 15)

Answers

Maths

- 1) C 12%
- 2) A DAECB
- 3) A 36, 48
- 4) A $\times 3$
- 5) 960

English

- 1) Any two from: it was covered in snow; it was very tall / towered majestically over the valley; it was a granite mountain / hard rocky surface
- 2) Accept any valid response, e.g.: Pete is cautious / nervous / fearful because he is worried about climbing the mountain. Evidence: he wondered if it was really safe to climb, said "I'm not sure about this," or "let his fear show."
- 3) Accept any valid response suggesting the mountain was impressive / grand / awe-inspiring, e.g.: the word suggests the mountain was magnificent and powerful, as if it had a royal presence; it implies Pete was struck by how enormous and commanding it appeared
- 4) Prepositions
- 5) Adverb