

Student Name: \_\_\_\_\_  
Please write your name on *every* page.

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## 1 Section A

### A1

What is the sum of 20 and 23?

Answer to A1: \_\_\_\_\_

### A2

A diver jumps off of a diving board that is 10 feet above the surface of a pool that is 15 feet deep, and then touches the bottom. How far does the diver travel vertically?

Answer to A2: \_\_\_\_\_

### A3

What time is it 78 minutes after midnight?

Answer to A3: \_\_\_\_\_

### A4

An apple orchard wants to pick apples from trees and bake them into apple pies. Each pie needs 6 apples, and each tree has 10 apples on it. If they want to make 5 pies, what is the minimum number of trees they need to pick apples from?

Answer to A4: \_\_\_\_\_

### A5

Kevin wants to divide his cookies among 7 friends. He currently has 24 cookies. What is the minimum number of additional cookies he needs in order to give each friend the same number of cookies, with none left over?

Answer to A5: \_\_\_\_\_

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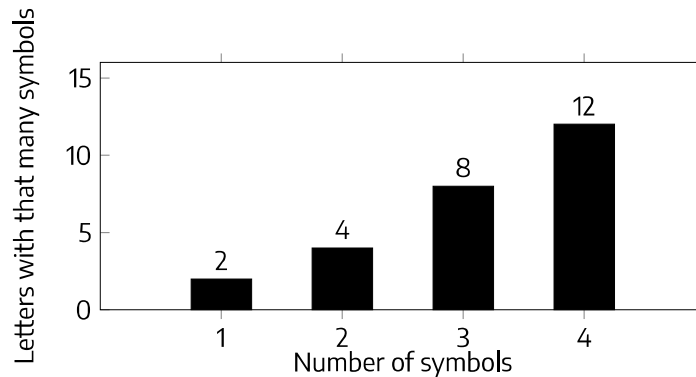
**A6**

If someone celebrates their 65th birthday in 2023, what year were they born in?

Answer to A6: \_\_\_\_\_

**A7**

In Morse Code, each letter of the alphabet is represented by some symbols called “dots” and “dashes”. Here is a graph of the number of symbols it takes to represent letters in Morse Code.



How many letters are represented by an even number of symbols?

Answer to A7: \_\_\_\_\_

**A8**

Starting with the number 1, Jackson repeatedly adds a number to itself, and then uses that as the next number to be added to itself. For example, if he does this three times, he gets  $1 + 1 = 2$ , then  $2 + 2 = 4$ , and then  $4 + 4 = 8$ . In this case, the final number that he gets is 8. Starting at 1, if he does this seven times, what is the final number that he gets?

Answer to A8: \_\_\_\_\_