

注意：

允許學生個人、非營利性的圖書館或公立學校合理使用本基金會網站所提供之各項試題及其解答。可直接下載而不須申請。

重版、系統地複製或大量重製這些資料的任何部分，必須獲得財團法人臺北市九章數學教育基金會的授權許可。

申請此項授權請電郵 [ccmp@seed.net.tw](mailto:ccmp@seed.net.tw)

**Notice:**

**Individual students, nonprofit libraries, or schools are permitted to make fair use of the papers and its solutions. Republication, systematic copying, or multiple reproduction of any part of this material is permitted only under license from the Chiuchang Mathematics Foundation.**

**Requests for such permission should be made by e-mailing Mr. Wen-Hsien SUN [ccmp@seed.net.tw](mailto:ccmp@seed.net.tw)**

---

## Upper Primary Division

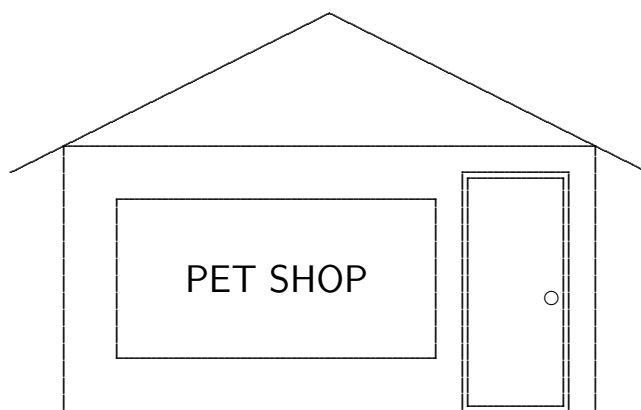
---

### Questions 1 to 10, 3 marks each

1. What is one thousand and twenty-seven in numerals?

- (A) 100 027      (B) 10 027      (C) 1027      (D) 127      (E) 27
- 

2. Jillian is standing inside a pet shop and looking out the window shown in the diagram.



What does she see?

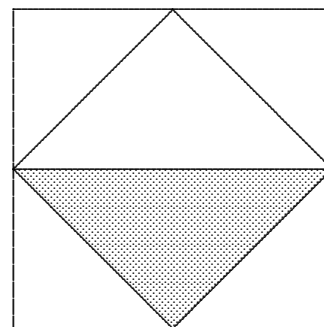
- (A) POHS TEP      (B) POH2 TEP      (C) TEP 9OH2  
(D) POH2 TEP      (E) 9OH2 TEP
- 

3. Lee is 14 years old. Liz is 10 years old. Dad's age is twice the sum of their ages. How old is Dad?

- (A) 46      (B) 48      (C) 50      (D) 52      (E) 54
- 

4. The midpoints of the sides of a square are joined as shown. A part of the original square is shaded as shown. What fraction of the original square is shaded?

- (A)  $\frac{1}{4}$       (B)  $\frac{1}{6}$       (C)  $\frac{2}{3}$   
(D)  $\frac{1}{3}$       (E)  $\frac{1}{5}$



5. In a queue in the school canteen, Sarah was behind Tim and Carl was between Sarah and Tim. Sarah was in front of Brett who was in front of George. Who was fourth in line?

(A) Sarah      (B) Tim      (C) Carl      (D) Brett      (E) George

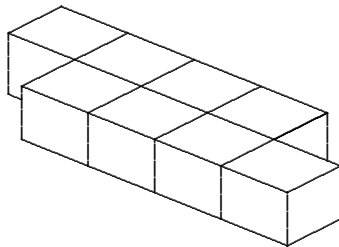
---

6. When five numbers are added the total is 2010. One of the numbers is changed from 235 to 532. What is the total of the five numbers now?

(A) 1723      (B) 2542      (C) 2360      (D) 1896      (E) 2307

---

7. Eight blocks are glued together as shown.



How many faces of these blocks are glued together?

(A) 7      (B) 8      (C) 10      (D) 12      (E) 18

---

8. What is the difference between the largest and smallest 3-digit numbers that can be made from the following 1-digit cards, if each card is to be used once only in each number?

2
---

7
---

5
---

(A) 477      (B) 495      (C) 1009      (D) 468      (E) 555

---

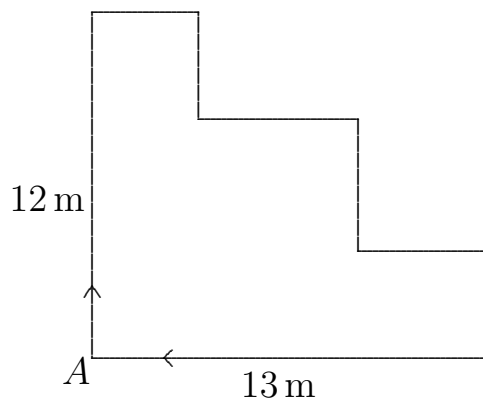
9. My father won \$1000 in a lottery. He put one-fifth in the bank, spent one-quarter of what was left on me and gave the rest to my mother. How much did my mother receive?

(A) \$400      (B) \$888      (C) \$450      (D) \$550      (E) \$600

---

10. Starting at  $A$  and walking around the figure back to  $A$ , how far do I walk?

- (A) 52 m      (B) 48 m      (C) 54 m  
(D) 50 m      (E) 56 m



**Questions 11 to 20, 4 marks each**

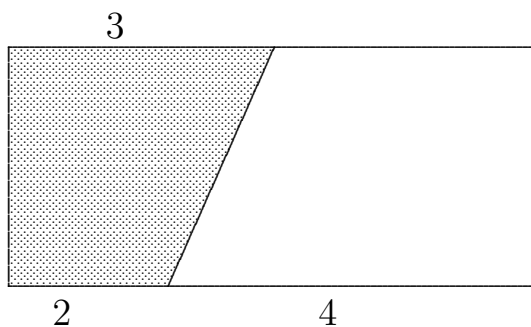
11. This is Liam's timetable for a normal school day.

Time	Activity
9:00 am – 9:10 am	Morning assembly
9:10 am – 11:00 am	Class time
11:00 am – 11:30 am	Recess
11:30 am – 1:00 pm	Class time
1:00 pm – 1:50 pm	Lunchtime
1:50 pm – 3:00 pm	Class time
3:00 pm	Home time

How many minutes of class time does Liam have every day?

- (A) 300      (B) 250      (C) 500      (D) 270      (E) 240
12. The average of two numbers is 11. One of the numbers is 6 more than the other. Which is the larger number?
- (A) 6      (B) 8      (C) 11      (D) 14      (E) 17

13. What fraction of the rectangle is shaded?

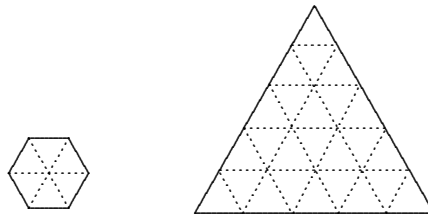


- (A)  $\frac{1}{3}$       (B)  $\frac{5}{12}$       (C)  $\frac{1}{2}$       (D)  $\frac{2}{7}$       (E)  $\frac{3}{8}$

14. In a group of 55 students, exactly 39 are enrolled in mathematics and exactly 35 are enrolled in science. How many students are enrolled in both mathematics and science?

(A) 20                      (B) 16                      (C) 19                      (D) 4                      (E) 55

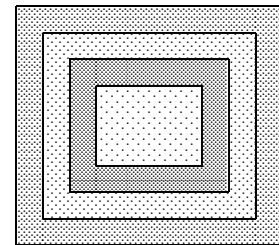
15. Jeremy decides to measure area in hexagonal units (instead of squares) using the hexagonal unit as shown.



What is the area of the triangle in Jeremy's hexagonal units?

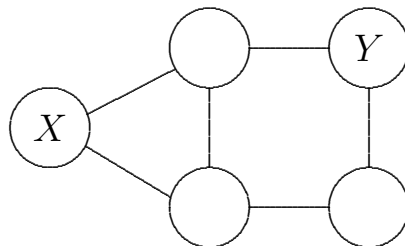
(A) 4                      (B)  $4\frac{1}{6}$                       (C)  $4\frac{1}{3}$                       (D)  $4\frac{1}{2}$                       (E) 3

16. To make a quilt 120 cm by 90 cm for my baby's cot, I add borders to a central panel as shown. If the borders are the same width all the way around, then the dimensions of the central panel, in centimetres, could be



(A) 100 by 60                      (B) 90 by 60                      (C) 90 by 70  
(D) 86 by 36                      (E) 75 by 50

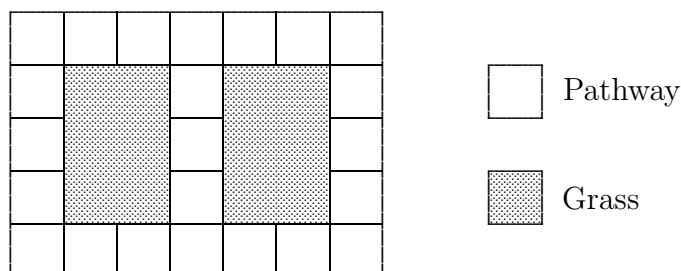
17. Place the numbers 1, 2, 3, 4 and 5, one in each circle in the diagram so that no number is joined by a line to a consecutive number.



The sum of the numbers  $X$  and  $Y$  could be

(A) 3                      (B) 4                      (C) 6                      (D) 7                      (E) 8

18. Below is a diagram of a garden. Some of the garden is grass and some is a pathway made from square blocks.



The total area of the grass is 108 square metres.

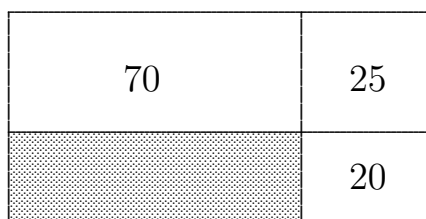
What is the area, in square metres, of the pathway?

- (A) 216      (B) 54      (C) 181      (D) 207      (E) 200
- 

19. A shop has a sale and sells hats for \$12 each in the morning, taking \$720. After lunch, the price is dropped to \$9 each and the shop sells twice as many. What was the total amount taken on the day?

- (A) \$1800      (B) \$900      (C) \$1260      (D) \$1440      (E) \$2880
- 

20. The areas, in square centimetres, of three rectangles are given.



What is the area, in square centimetres, of the shaded rectangle?

- (A) 36      (B) 48      (C) 56      (D) 60      (E) 70
- 

**Questions 21 to 25, 5 marks each**

21. Mike thinks of a two-digit number. Karen reverses the digits and when the two numbers are added the total is 132. How many different numbers could Mike have thought of?

- (A) 4      (B) 7      (C) 8      (D) 10      (E) 12
-



- 25.** Five rectangles, each 12 cm long and of equal width, are placed together to form a single rectangle, still 12 cm long but 5 times as wide. The new rectangle has a perimeter twice as great as each of the original rectangles. What is the perimeter, in centimetres, of the new rectangle?
- (A) 48            (B) 60            (C) 64            (D) 72            (E) 84
- 

For questions 26 to 30, shade the answer as a whole number from 0 to 999 in the space provided on the answer sheet.

Question 26 is 6 marks, question 27 is 7 marks, question 28 is 8 marks, question 29 is 9 marks and question 30 is 10 marks.

---

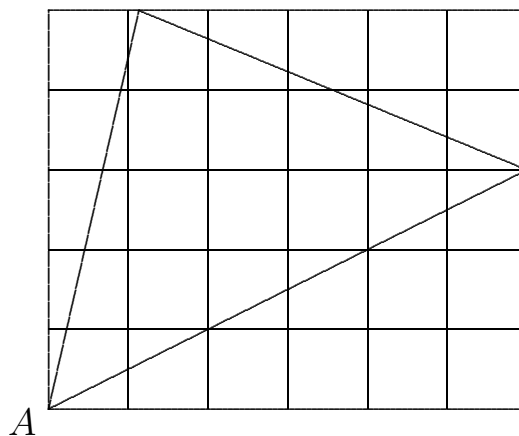
- 26.** Consider this statement:

THIS IS ONE GREAT MATHS CHALLENGE

Every minute, the first letter of each word is moved to the other end of the word. In how many minutes will the original sentence appear back again?

---

- 27.** Below is an example of a triangle drawn on a 6 by 5 grid with one vertex  $A$  on the bottom left-hand corner and the other two vertices on the top and right-hand boundaries.



What is the largest number of squares that can be cut by the sides of such a triangle?

---



**28.** The product of three consecutive whole numbers is 12 144. What is their sum?

---

**29.** When a number has the digit 2 put at both ends, its value increases by 2785. What is the original number?

---

**30.** I have 4 black and 4 white cubes of equal size. In how many different ways can they be put together to form a  $2 \times 2 \times 2$  cube? (Two cubes are not considered different if they can be rotated to look the same.)

---