

# Study Assistant

PRACTICE SEA TESTS

## MATHEMATICS

Based on the Revised SEA Framework  
2021-2023

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January 2024

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SEA Practice Test #7

# MATHEMATICS

Based on the Revised SEA Framework 2021-2023

School:

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Student's Name:

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Date:

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## **INSTRUCTIONS**

This test is divided into THREE sections with a total of 40 questions.

SECTION 1 has 20 questions (nos. 1-20), Section 2 has 16 questions (nos. 21-36) and SECTION 3 has 4 questions. (nos. 37-40).

You have 75 minutes to answer ALL questions. Read each question carefully and show all working in the space provided. Marks will be given for correct steps taken.

**DO NOT BEGIN UNTIL YOU ARE TOLD TO DO SO.**

## Section 1

1. Write in words the number that has the place values of 4 tens, 5 tenths and 8 hundredths.

Answer:

---

(1 mark)

---

2. Round 8 589 to the nearest hundred.

Answer: \_\_\_\_\_

(1 mark)

---

3. What is the smallest odd number you can make with the digits **3 6 8 7**?

Answer: \_\_\_\_\_

(1 mark)

---

4. Calculate the average of:

**4, 6, 8, 10, 9**

Answer: \_\_\_\_\_

(1 mark)

---

5. Estimate the sum of 516, 153, 692, 475, and 108?

Answer: \_\_\_\_\_

(1 mark)

---

6. Which number is equivalent to  $\frac{2^4}{4^2}$  ?

- a. 0      b. 1      c. 2      d. 3      e. 4

Answer: \_\_\_\_\_ (1 mark)

---

7. Complete the sequence.

5.2, 11.5, 17.8\_\_\_\_\_, 30.4

Answer: \_\_\_\_\_ (1 mark)

---

8. Every day 3 baskets of fruits are sent to a home for children. How many baskets of fruits were sent at the end of two weeks?

Answer: \_\_\_\_\_ (1 mark)

---

9. Which of the following bags of coins weighs the most?

**2  $\frac{3}{4}$  grams      2.69 grams      2  $\frac{1}{4}$  grams**

Answer: \_\_\_\_\_ (1 mark)

---

10. Mark had 56 marbles. He got more marbles during Christmas. He now has 245 marbles.  
How many marbles did he get during Christmas?

Answer: \_\_\_\_\_

(1 mark)

---

11. Calculate:  $153 \div 4$ .

Answer: \_\_\_\_\_

(1 mark)

---

12. Complete the working.

$$\begin{array}{r} 8 \square \square 4 \\ - 3 \square 3 8 \\ \hline 4 6 4 6 \\ \hline \end{array}$$

(1 mark)

---

13. On a bookshelf, there are 5 shelves. Each shelf can hold about 8 books. How many books can the bookshelf hold?

Answer: \_\_\_\_\_

(1 mark)

---

14. Jaimee was 22 years old five years ago. Her sister is 11 years older. How old is her sister today?

Answer: \_\_\_\_\_

(1 mark)

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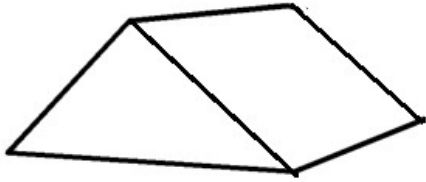
15. Lee travelled 150 miles in 3 hours. What is the average speed he travelled?

Answer: \_\_\_\_\_

(1 mark)

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16. Name the solid below.



Answer: \_\_\_\_\_

(1 mark)

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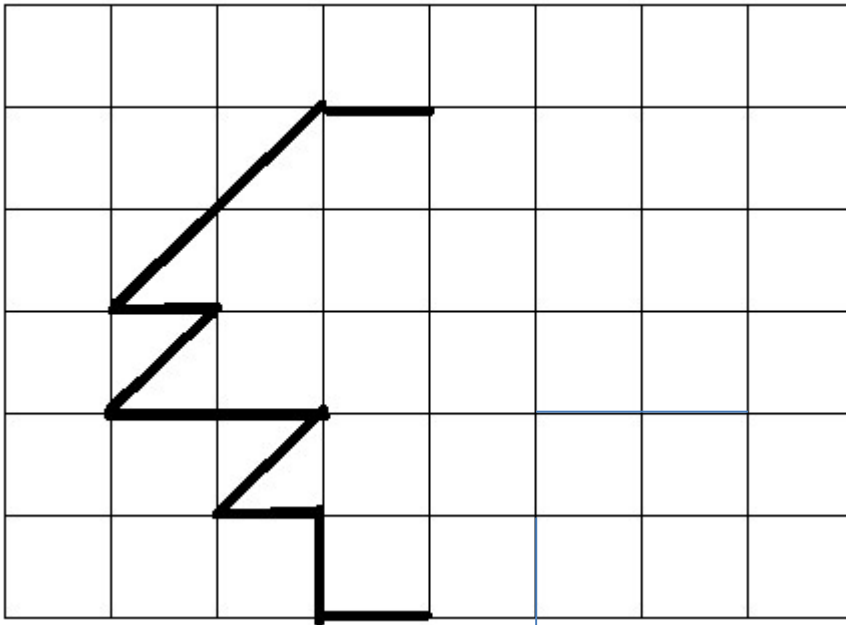
17. What is 26% of \$2 500.

Answer = \_\_\_\_\_

(1 mark)

---

18. Draw a line of symmetry on the shape below.



1 marks

---

19. Calculate:

(1 mark)

$$5^2 + \sqrt{64} =$$

Answer: \_\_\_\_\_

---

20. Calculate:  $201 \times 36$ .

Answer: \_\_\_\_\_

(1 mark)

---

## SECTION 2

21. Select the appropriate unit to measure a room.

Metre

Centimetres

Kilometres

Litres

Answer: \_\_\_\_\_

(1 mark)

Explain the suitability of this measurement.

(2 marks)

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22. Which two prime numbers below will give you a total of 18?

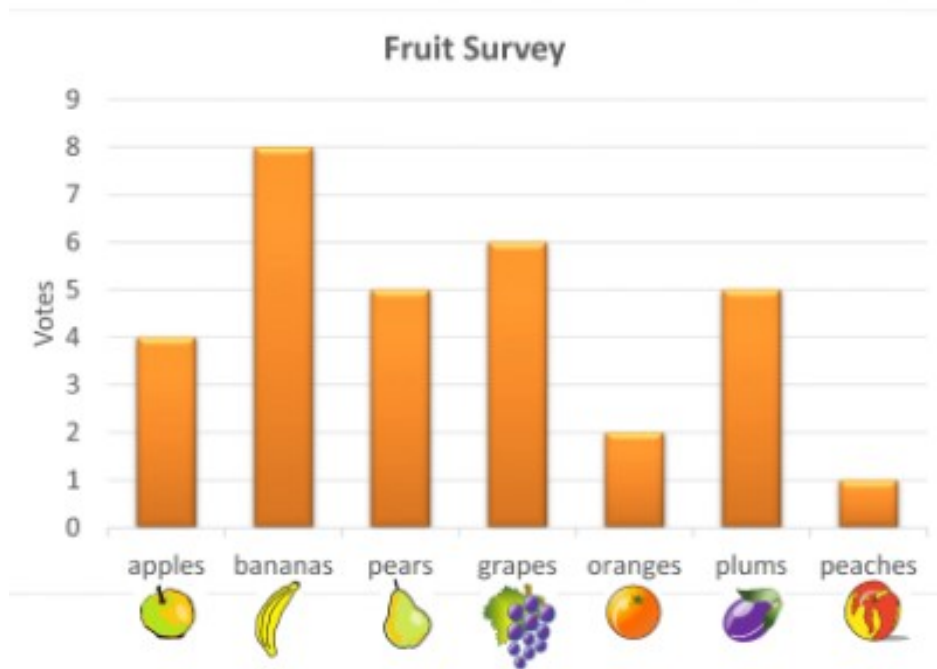
**4, 5, 6, 7, 8, 9, 10, 11, 12**

Answer: \_\_\_\_\_

(2 marks)

---

23. The bar graph below shows the preference of fruits in a class. How many students are in the class? (2 marks)



Answer: \_\_\_\_\_

---

24. A rental company is purchasing chairs and tables. The chairs and tables are to be purchased in a ratio of 6:1.
- a. If 25 tables are purchased, how many chairs should be purchased.

Answer: \_\_\_\_\_

(1 mark)

- b. The company purchases a set of 6 chairs and one table for \$2300.00. How much did the Rental company pay for the tables and chairs altogether?

Answer: \_\_\_\_\_

(1 mark)

- 
25. The selling price of two shirts and a jacket is \$175.00. The selling price of the two shirts and two jackets is priced as \$250. What is the price of five shirts and three jackets?

Answer: \_\_\_\_\_

(3 mark)

26. Use words and diagrams to explain and show how  $\frac{3}{4}$  is equal or not equal to  $\frac{14}{16}$ .

Answer:

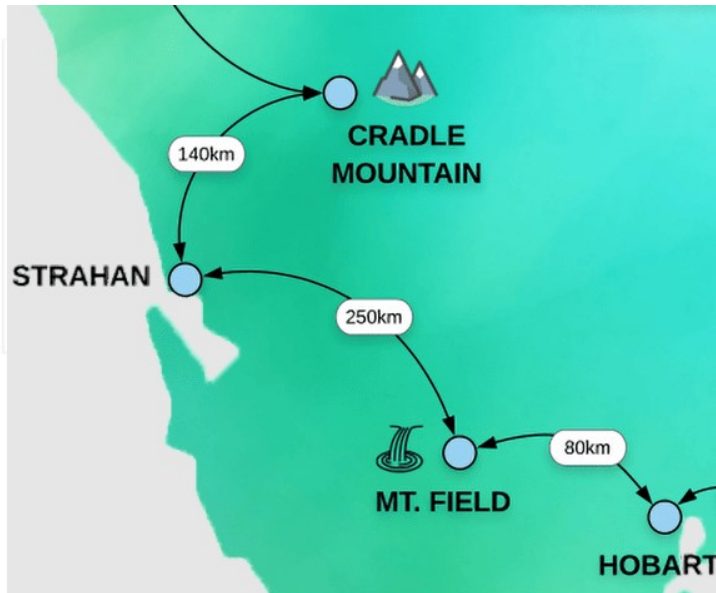
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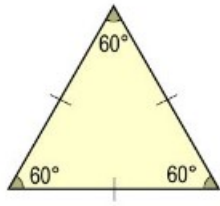
(3 mark)

27. The distance between four places is shown below. A train travels from Hobart to Cradle Mountain every day at 188 km/h. If the train leaves Hobart at 5:00 A.M, rest at Strahan for 30 minutes, what time would it arrive at Cradle Mountain? (3 marks)

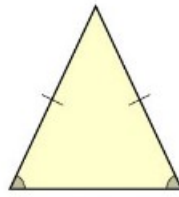


Answer: \_\_\_\_\_

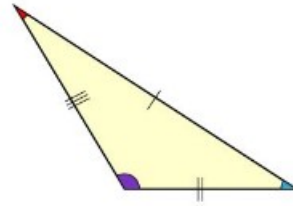
28. Three triangles are drawn below and labelled A, B, and C.



A



B



C

Use the triangles above to complete the table below.

(3 marks)

Triangles	Types of Triangles
A	
B	
C	

29. A cubical container with side 30 cm is  $\frac{1}{3}$  filled with water. How much water is in the container?

Answer: \_\_\_\_\_

(3 marks)

30. Selena turned in a clockwise direction to face Southwest. What fraction of a turn did she make if she was previously facing East?

Answer: \_\_\_\_\_

(1 mark)

b) What is the degree of this turn?

Answer: \_\_\_\_\_

(1 mark)

---

31. The mean of 46, 64, 58 is 56. If the mean increase to 62, what is the forth numbers.

Answer: \_\_\_\_\_

(2 mark)

32. Taren has three pizzas cut into  $\frac{1}{8}$  slices. She shared  $\frac{1}{3}$  of the pizza slices with her friends and the remainder she kept for the beach party with her family.

a. How many slices of pizza were there altogether?

Answer: \_\_\_\_\_

(1 mark)

b. How many slices will she have to share at the party?

Answer: \_\_\_\_\_

(1 mark)

c. Taren decided to cut the remaining pizza in half for the party guest. If each guest will get one, how many guest were at the party?

Answer: \_\_\_\_\_

(1 mark)

---

33. Every sixth person entering a store was given a box of cereal during a special day. If 249 persons entered the store how many boxes of cereal was given out?

Answer: \_\_\_\_\_

(2 mark)

---

34. Below are heaps of plums that are sold at the market by Maria and Joyce sell heaps of corn. They both sold the same quantity of plums at the same price. Who will make more money? Explain how you know this person will make more money?



**Maria**



**Joyce**

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---

---

---

(3 marks)

---

35. There are 600 students in a school. 240 students would be going on an excursion. What percentage of students remains in school?

Answer: \_\_\_\_\_

(2 mark)

---

36. A family set out on a 30-mile hike. The first day they hiked 8 miles, and the second day they hiked 6 miles. How many miles were left to complete the hike?

Answer: \_\_\_\_\_

(2 marks)

---



### SECTION 3

37. A boy must take two traveling paths to get to school every day.

Path	Distance	Time taken
A	1125 metres	35 minutes
B	3 km	1 hour 15 minutes

a. What is the total distance in km the boy travels every day?

Answer: \_\_\_\_\_

(2 marks)

b. How long does it take the boy to get to school?

Answer: \_\_\_\_\_

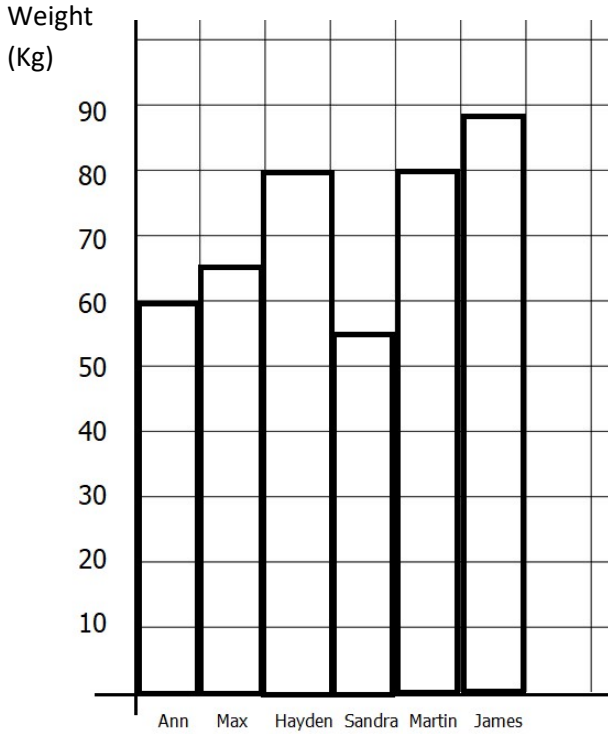
(1 mark)

c. If the boy must reach to school at 8:15 A.M, what time should he leave home?

Answer: \_\_\_\_\_

(1 mark)

38. Below is the weight of individuals in a family.



a. What is the average weight of the family?

(1 marks)

Answer: \_\_\_\_\_

b. What is the modal weight of the family?

(1 mark)

Answer: \_\_\_\_\_

c. The family would like to rent a small boat to go down the island together. If the boat can carry only 476.3 kg, can the family go together? (2 marks)

Give a reason for your answer.

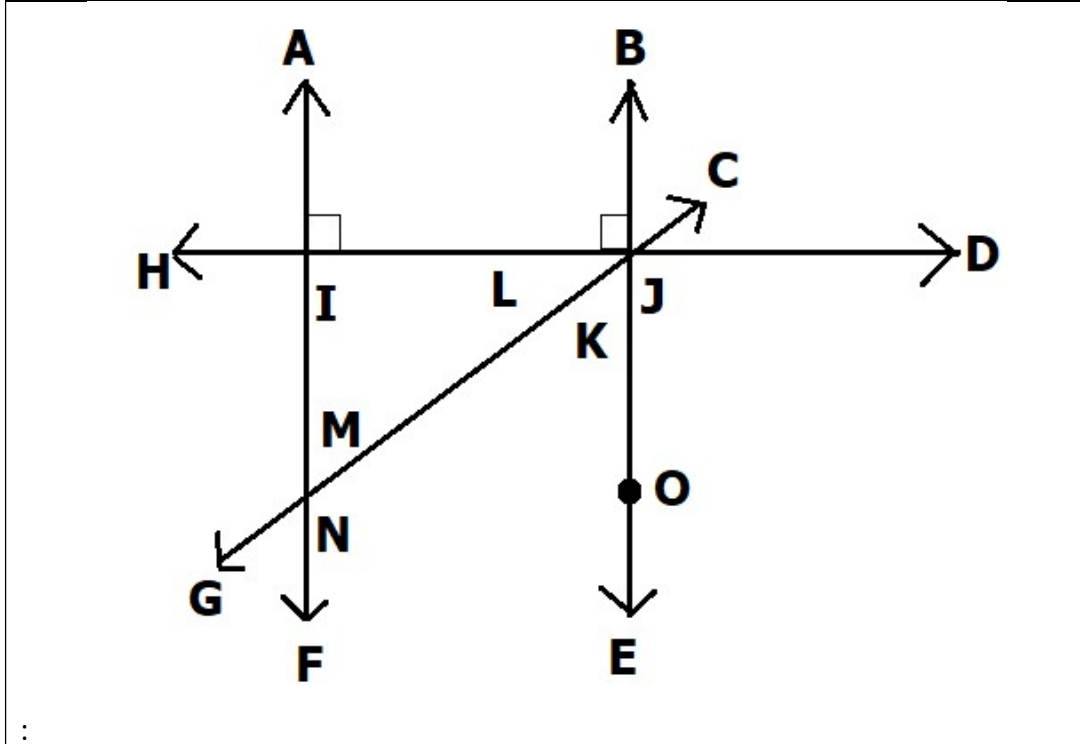
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39. Use the figure below to help you complete the grid below.

(4 marks)



:	
Acute angle	
Obtuse angle	
Parallel two lines	
Two perpendicular lines	

40. A math class had 32 students. Each student was given 9 math problems to solve.

a) How many problems were solved in all?

Answer: \_\_\_\_\_

(1 marks)

b) A student got 56% of his problems solved. How many questions were not solved?

Answer: \_\_\_\_\_

(2 marks)

c) 75% of students got all their questions correct. How many students got all their questions correct?

Answer: \_\_\_\_\_

(1 marks)

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END OF EXAM

## Answers:

### SECTION 1

1. 40.58 -- words: forty and five eights.

2. 8600

3. 6783

4. 7.4

5.  $516 + 153 + 692 + 475 + 108 = 500 + 200 + 700 + 500 + 100 = 2000$

6.  $2 \times 2 \times 2 \times 2 = 16$   $4 \times 4 = 16$   $16/16 = 1$

7. 5.2, 11.5, 17.8, 24.1, 30.4.

8.  $3 \times 14 = 42$  baskets of fruits

9  $2 \frac{3}{4}$  grams

10.  $245 - 56 = 189$  marbles

11.  $153/4 = 38.25$

12.  $8484 - 3838 = 4646$

13.  $8 \times 5 = 40$  books

### SECTION 2

21. cm

22.  $7 + 11 = 18$

23.  $4 + 8 + 5 + 6 + 2 + 5 + 1 = 31$  students

24 a)  $25 \times 6 = 150$  chairs (b)  $25 \times 2300 = \$57500$

25. 1 jacket =  $250 - 175 = 75$ ; so 1 shirt =  $\$100/2 = \$50$ ; 5 shirts and 3 jacket =  $(5 \times 50) + (3 \times 75) = \$475$

or

since 2 shirts and 1 jacket  $\$175 + 2$  shirts and 2 jackets is  $\$250 + 1$  shirt =  $,175 + 250 + 50 = \$475$

26. Draw showing its equivalent is  $12/16$ .  $3/4$  the two fractions is not equal. The equivalent of  $3/4$  is  $12/16$ .

27. Total distance =  $140 + 250 + 80 = 470$ ; time taken =  $470/188 = 2.5$  hours; total time taken =  $2.5$  hours +  $0.5$  hour = 3 hours. Arrival time =  $5 + 3 = 8$  A.M

28. A- equilateral, B- isosceles, C- scalene

29. Cubical container has the volume capacity =  $30 \times 30 \times 30 = 2700 \text{ cm}^3$ ; and can hold =  $27000/1000 = 27$  litres of water. Therefore: the container has  $27/3 = 9$  l of water. (note:  $1000 \text{ cm}^3 = 1$  litre)

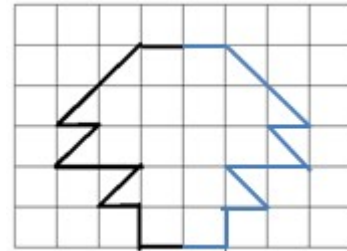
30. a)  $1/4 + 1/8 = 3/8$  b)  $90 + 45 = 135$  degrees

14.  $22 + 11 + 5 =$  Her sister is 38 years old

15. He travelled 50 m/hr

16. Triangular prism

17.  $0.25 \times \$2500 = \$650$



18.

19.  $(5 \times 5) + (8) = 25 + 8 = 33$

20.  $201 \times 36 = 7236$

31. Total of the three numbers:  $46+64+58=168$ ; total of four with the mean  $62=62 \times 4=248$ ; therefore the fourth number is  $248-168=80$
32. a)  $3 \times 8=24$  slices total      b)  $24-8=16$       c)  $16 \times 2=32$  guest
33.  $249/6=41.5$  ; therefore 41 boxes of cereal was given out.
34. Joyce will make more money than Maria. She will have more heaps than Maria, and since the price of the heap is the same, she will get more money, once she sells all her heaps of plum.
35.  $600-240=360$  students remained;  $360/600=0.60$  or 60% of students remain in school.
36.  $30-(8+6)=30-14=16$  miles

### SECTION 3

37. a)  $1125+3000=4125$  m;  $4125/1000=4.125$ km; b)  $35 \text{ min}+1\text{hr}15\text{min}=1\text{hr } 50 \text{ minutes}$ ;  
c. 6:25 A.M (note: you can count backwards from 8:15)
38. a)  $60+65+80+55+80+89=429/6=71.5$ kg; b) 80 kg; c. the boat can carry the entire family leaving 47.3 kg free. However, only the family can be on the boat. Certainly, the captain of the boat will have to be one of the family members. the balance of weight can be luggage.
39. acute angle= any one- L,K,M; obtuse angle=N: parallel lines: AF and BE;  
perpendicular lines=AF and HD or BE and HD
40. a)  $32 \times 9=388$  math problems; b)  $1-0.56=0.44$  (not solved): therefore  $0.44 \times 9=\text{about } 5$  questions were not solved.; c)  $0.75 \times 32=24$  students

## Review Definition - Average

When we talk about the **average**, we are referring to a common measure of central tendency. It is a way to summarize a group of numbers by finding a representative value.

The most commonly used average is the arithmetic mean, which is calculated by adding up all the numbers in a set and then dividing by the total count.

**For example**, let's say we have a set of numbers: 5, 10, 15, 20, and 25. To find the average, we add up all these numbers ( $5 + 10 + 15 + 20 + 25 = 75$ ) and divide by the total count, which is 5. Therefore, the average of this set is 15.

### Study Tip:

When it comes to studying mathematics, one of the best tips I can give you is to practice, practice, and practice!

Mathematics is a subject that requires a lot of repetition and application in order to truly understand and master its concepts. So, make sure to do as many practice problems as you can get your hands on. Look for textbooks, online resources, or even ask your teacher for extra practice sets.

The more you practice, the more comfortable you will become with different types of problems and the better you will get at solving them.