

# Study Assistant

PRACTICE SEA TESTS

## MATHEMATICS

Based on the Revised SEA Framework  
2021-2023

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website

May 2024

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SEA Practice Test 8

# 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 column provided. Marks will be given for correct steps taken.

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

## SEA Practice Test 8 - Mathematics (75 minutes)

### Section 1

1. Write in words: 641 580

Answer:

---

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(1 mark)

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2. Round the number to the nearest thousand.

**8 439**

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

(1 mark)

---

3.  $5\,172 \div 25$ .

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

(1 mark)

---

4. Which of the number below is the smallest?

**314.01**

**314.10**

**341.06**

**241.56**

**314.21**

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

(1 mark)

## SEA Practice Test 8 - Mathematics (75 minutes)

5. Express **12.24** as a fraction in its lowest term.

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

(1 mark)

---

6. What number should be placed in the box to make the statement correct.

$$547.04 = (5 \times 100) + (4 \times 10) + (7 \times 1) + (4 \times \boxed{\phantom{00}})$$

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

(1 mark)

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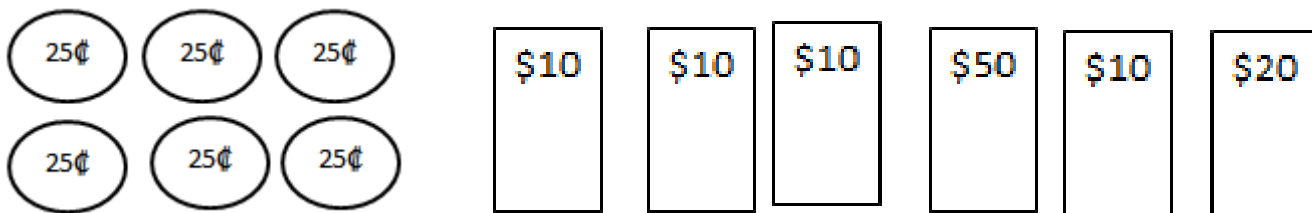
7.  $5\frac{2}{5} + 2\frac{1}{3} + 4\frac{1}{2} =$

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

(1 mark)

---

8. Paul has \$91.50 in total in his pocket. Which of the bills and coins represent the money in his pocket?



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

(1 mark)

---

## SEA Practice Test 8 - Mathematics (75 minutes)

9. What is the largest composite number in the box below?

43	16	7
9	1	79

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

(1 mark)

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10. Write  $67/5$  as a mixed number.

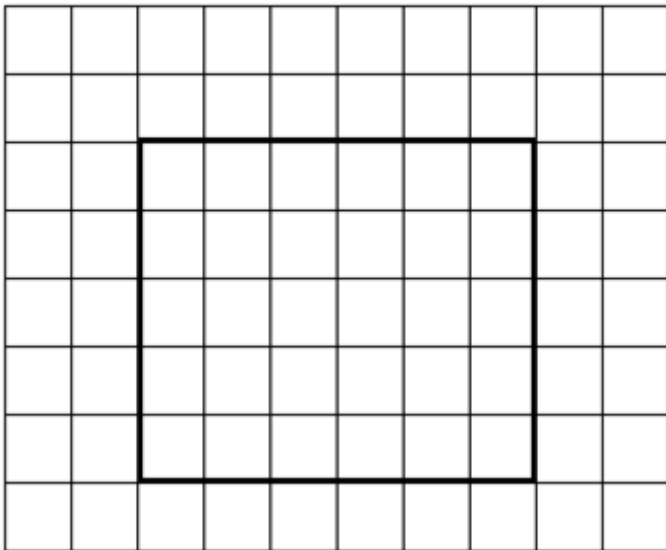
Answer: \_\_\_\_\_

(1 mark)

---

11. On the grid below each small square has an area of  $4 \text{ cm}^2$ ? Calculate the area of the shape drawn on the grid?

=  $4 \text{ cm}^2$



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

(1 mark)

---

## SEA Practice Test 8 - Mathematics (75 minutes)

12. Michael uses 500 ml of water for every 4 cups of flour in a recipe. How many litres of water would be needed in the recipe if he uses 12 cups of flour?

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

(1 mark)

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13. If a family buys a 12-month subscription to a magazine that starts in May, on what date will their subscription end?

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

(1 mark)

---

14. A rectangular poster measures 30.32 cm in length and 12.7 cm in width. What is the perimeter of the poster?

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

(1 mark)

---

## SEA Practice Test 8 - Mathematics (75 minutes)

15. Sarah has \$20. She wants to buy a book that cost \$12. How much money will she have left after buying the book?

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

(1 mark)

---

16. If  $\frac{3}{5}$  of a cake was eaten equally by three friends, how much of the cake did each friend eat?

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

(1 mark)

---

17. The hour hand of a clock is pointing at 4 and the minute hand is pointing at 6. What time is it?

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

(1 mark)

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18. A rope is 10 meters long. If a piece that is 3.5 meters long is cut off, how long is the remaining piece of the rope?

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

(1 mark)

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## SEA Practice Test 8 - Mathematics (75 minutes)

19. A fish tank has a length of 20 cm, a width of 10 cm, and a height of 15 cm. what is the volume of the fish tank in cubic centimetres?

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

(1 mark)

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20. What is the result of multiplying 25 by 6?

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

(1 mark)

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## SEA Practice Test 8 - Mathematics (75 minutes)

### SECTION 2

21. A school fundraiser sells 300 calendars in the month of November.

- a. If each calendar costs \$5, how much money did the calendars cost?

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

(1 mark)

- b. A calendar is sold for \$7.25. A student purchased 5 calendars using the \$50 his mom gave him. How much money will he have left after purchasing the calendars?

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

(2 mark)

---

22. Justin has a garden in the shape of a hexagon.

(1 mark)

- a. Draw the shape of the garden.

- b. If each side of the hexagon is 2 meters, what is the perimeter of the garden?

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

(2 mark)

## SEA Practice Test 8 - Mathematics (75 minutes)

23. If US \$1 is equal to TT \$7.00, how many TT dollars can you get with US \$25?

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

(2 mark)

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24. A triangle has two of its angles measuring  $45^\circ$  and  $60^\circ$ .

a. What is the measure of the third angle?

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

(2 mark)

b. What type of triangle is formed by these angles?

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

(1 mark)

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25. Calculate:

a. The sum of the prime numbers between 20 and 40.

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

(2 marks)

b. The average of the prime numbers between 20 and 40.

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

(1 mark)

---

## SEA Practice Test 8 - Mathematics (75 minutes)

26. A shape is rotated clockwise after for consecutive 45-degree rotations.

a. How many degrees was the shaped rotated? (1 mark)

b. What type of angle did it make?

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

---

27. Given a rectangle with dimensions as follows: the length is 8 cm and the width is a variable 'x' cm.

a. If the perimeter of the rectangle is 28 cm, what is the value of 'x'?

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

b. What is the area of the rectangle?

Answer: \_\_\_\_\_ (1 marks)

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28. Jack bought mammy apples and a box of oranges for \$70. He paid the vendor \$160 dollars for the produce. A mammy apple cost \$9.00 each. How many mammy apples were purchased?

Answer: \_\_\_\_\_ (3 mark)

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## SEA Practice Test 8 - Mathematics (75 minutes)

29. A store sells T-shirts for \$15 each. The store owner decides to offer a 20% discount on all T-shirts during a weekend sale. If the store sells 120 T-shirts during the sale, how much revenue did the store generate?

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

(2 mark)

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30. In a class of 30 students,  $\frac{2}{5}$  of the students are girls. If  $\frac{1}{3}$  of the girls have brown hair, what fraction of the entire class are girls with brown hair? Express your answer in simplest form?

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

(3 mark)

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31. In a small class of 8 students, the scores on a math test were: 85, 90, 79, 85, 85, 64, 95, 79, 85.

a. What is the mean (average) score of the class?

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

(2 mark)

b. What is the mode score of the class?

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

(1 mark)

---

## SEA Practice Test 8 - Mathematics (75 minutes)

32. A bakery sells cakes and cookies. The ratio of the number of cakes to the number of cookies sold in a day is 2:5. If the bakery sold a total of 210 cakes and cookies combined, how many cakes did they sell?

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

(3 mark)

- 
33. At 6:30 AM, a train departs from Station A and travels at a speed of 60 km/h towards Station B. At 7:15 AM, a second train departs from Station B and travels towards Station A at a speed of 75 km/h. The distance between the two stations is 450 kilometers. At what time will the two trains pass each other?

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

(3 mark)

- 
34. Jenny had a box of chocolates with 24 pieces. She decided to share them equally among herself and her 3 friends. Explain your answer. How many pieces of chocolate did each person receive? Use word and diagrams to explain your answer.

Answer:

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(3 marks)

## SEA Practice Test 8 - Mathematics (75 minutes)

35. The following table shows the scores of two students, John and Sarah, on five math quizzes:

Quiz Number	John's Score	Sarah's Score
1	85	75
2	90	80
3	88	82
4	92	85
5	86	90

Compare the mean scores of John and Sarah. Who performed better on average?

Answer:

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(2 mark)

36. In a bag of marbles, the ratio of red marbles to blue marbles is 3:5.

a. If there are a total of 15 red marbles in the bag, how many blue marbles are there?

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

(2 marks)

b. If the ratio of red marbles to the total number of marbles in the bag is expressed as a fraction, what is the fraction?

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

(1 mark)

## SEA Practice Test 8 - Mathematics (75 minutes)

### SECTION 3

37. Three ice cubes are placed in a container of water with a volume of  $500 \text{ cm}^3$ , what will be the total volume of water after the ice cube has completely melted?



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

(4 mark)

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38. Diane drinks  $\frac{2}{5}$  of a litre of water every hour during her 5-hour hike. At the halfway point of her hike, she refills her water bottle with  $1 \frac{1}{4}$  litres of water. How much water does she have left at the end of her hike?

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

(4 mark)

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## SEA Practice Test 8 - Mathematics (75 minutes)

39. A cylindrical tank has a diameter of 6 meters and a height of 8 meters. An enclosed cone is placed upside down inside the tank, with its base touching the bottom of the tank and its vertex to the top of the tank. The cone has a height of 4 meters and a radius of 3 meters. Show your answers as a whole number.

- a) What is the total volume of water this tank can hold when filled to the brim with the cone inside?

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

(3 marks)

- b) Using the information above, show visually, and complete the statement below

The tank can only be filled to \_\_\_\_\_% of its capacity with this cone inside of it.

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

(1 mark)



## SEA Practice Test 8 - Mathematics (75 minutes)

40. Jamie is planning to paint two opposite walls in a room with a tin a paint. The room has dimensions of 4 meters in length, 3 meters in width, and 2.5 meters in height.



- a. If one litre of paint can cover an area of 10 square meters, how many litres of paint does Jamie need to paint the two longer walls of the room?

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

(2 marks)

- b. If Jamie decides to paint the ceiling of his room as well, which has the same dimensions as the floor, how much paint is left in the tin?

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

(2 marks)

## SEA Practice Test 8 - Mathematics (75 minutes)

### Answers:

1. six hundred forty one thousand five hundred and eighty.
2. 8000
3. 206.88
4. 241.56
5.  $12\frac{6}{25}$
6.  $\frac{1}{100}$
7.  $12\frac{7}{30}$
8. 1- \$50, 1-\$20, 2-\$10, 6-25c
9. (Note: composite numbers is a natural number or a positive integer which has more than two factors.  
Answer=16
10.  $13\frac{2}{5}$
11. number of small squares= $6 \times 5 = 30$ ,  
so:  $30 \times 4 = 120 \text{cm}^2$
12. 4 c = 500 ml;  
 $\times 3 \quad \times 3$   
12 c = 1500ml  
Answer=1500 ml
13. April the following year.
14. perimeter =  $30.32 + 30.32 + 12.7 + 12.7 = 86.04 \text{cm}$
15.  $20 - 12 = \$8$  left
16. Each had  $\frac{1}{5}$  of that that piece of cake ( $\frac{3}{5}$ ).
17. half past 4 or 4:30
18. 6.5m
19.  $3000 \text{cm}^3$
20. 150
21. a. cost of calendars =  $300 \times 5 = \$1500$ ;  
b.  $7.25 \times 5 = \$36.25$ ;  $50 - 36.25 = \$13.75$  (money left after purchasing the calendars)
22. a. pic of hexagon; b. perimeter =  $2 \times 6 = 12$  meters
23. if  $\$1 \text{US} = \$7 \text{TT}$ ,  $\$25 \text{US} = 25 \times 7 = \$175 \text{TT}$
24. a. third angle =  $180 - (45 + 60) = 75$  degrees. b. acute triangle
25. (note: prime numbers are numbers that are only divisible by themselves and by 1) a. prime numbers between 20 and 4 is  $23 + 29 + 31 + 37 = 120$ ;  
average =  $120 / 4 = 30$
26. a. The shape was rotated a total of 180 degrees (4 rotations  $\times$  45 degrees each). b. The shape made right angles with each rotation, so the type of angle it made was a right angle.
27. Given the perimeter is 28cm. the width =  $(28 - 16) / 2 = 6 \text{cm}$ . So the area =  $8 \times 6 = 48 \text{cm}^2$
28. Mammy apples + 70 = \$160, so the mammy apples = \$90. amount of mammy apples purchased =  $90 / 10 = \$9$  (Answer)
29. the discounted T-shirt =  $15 \times 0.80 = \$12$ ; so 120 T-shirts =  $12 \times 120 = \$1,440$
30. amount of girls in class =  $\frac{2}{5} \times 30 = 12$ ;  
Amount of girls with brown hair =  $\frac{1}{3} \times 12 = 4$  girls
31. a.  
 $85 + 90 + 79 + 85 + 85 + 64 + 95 + 79 + 87 = 749$ ;  
average =  $749 / 9 = 83$  (answer)  
b. 85;
32. ratio of cakes to cookies is 2:5; total ratio is  $2 + 5 = 7$ ; each share is  $210 / 7 = 30$ ; number of cakes sold = 60 cakes

## SEA Practice Test 8 - Mathematics (75 minutes)

33. Calculate the head start the first train has:- The first train departs at 6:30 AM and travels for 45 minutes (0.75 hours) before the second train starts moving.

Distance the first train covers =  $60 \text{ km/h} \times 0.75 \text{ h} = 45 \text{ km}$

2. Set the equation for the distance between the two trains when they meet:

- Let  $t$  be the time taken for the second train to catch up to the first train.
- The second train travels at  $75 \text{ km/h}$  and catches up with the first train that has a  $45 \text{ km}$  lead.
- The sum of distances covered by both trains will equal the total distance between the stations ( $450 \text{ km}$ ).

$$60t + 45 = 75t$$

$$45 = 15t$$

$$t = 3 \text{ hours}$$

3. Add the time taken for the second train to catch up (3 hours) to the time it started moving (7:15 AM):  
 $7:15 \text{ AM} + 3 \text{ hours} = 10:15 \text{ AM}$

Therefore, regardless of the method used, the two trains will pass each other at 10:15 AM.

34. 1. Divide the total number of marbles (24) by the number of

people to find out how many marbles each person will receive.

$$24 \div 4 = 6$$

Each person will receive 6 marbles.

Red marbles  $3 = 15$  marbles; amount of blue marbles =  $5/3 \times 4 =$

$$25(\text{answer-a}); \text{ b. } 15/40 = 3/8$$

(answer-b)

35. Mean Score Calculation:

$$\text{John's mean score} = (85 + 90 + 88 + 92 + 86) / 5 = 88.2$$

$$\text{Sarah's mean score} = (75 + 80 + 82 + 85 + 90) / 5 = 82.4$$

b) Comparison of Mean Scores:

John's mean score is 88.2, while

Sarah's mean score is 82.4.

Therefore, John performed better on average compared to Sarah.

36. a. Red:Blue

$$3: 5$$

If there are 15 red marbles, there are  $5 \times 3 = 15$  blue marbles

b.  $15/40 = 3/8$  fraction of number of marbles in the bag.

37. Vice=  $2 \times 2 \times 2 = 8 \text{ cm}^3$  ice cubes occupies the same volume as before but as water.

$$\text{Volume with ice} = 500 + 8 = 508 \text{ cm}^3$$

38. Half way through will see  $2 \frac{2}{5}$  l of water.  $\frac{2}{5} \times 2 = \frac{4}{5}$

$$\frac{4}{5} + 1 \frac{1}{4} = 1 \frac{9}{20}; \frac{19}{20} - \frac{6}{5} = 1 \frac{3}{4}$$

So, Diane has  $1 \frac{3}{4}$  of a litre of water left at the end of her hike.

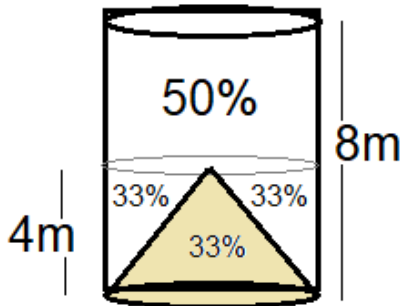
## SEA Practice Test 8 - Mathematics (75 minutes)

39. a. Volume of tank=  
 $\frac{22}{7} \times 3^2 \times 8 = 226. \text{ m}^3$   
 Volume of cone=  
 $\frac{1}{3} \times \frac{22}{7} \times 3^2 \times 4 = 38 \text{ m}^3$ ,  
 Tank can be filled with  
 $= 226 - 38 = 188 \text{ m}^3$  of water (answer)
- b. Answer= 83%

Another method after finding the volume of the tank:

$$226/2 = 113 \text{ m}^3$$

$$113/3 = 37.6 \text{ or } 38 \text{ m}^3$$



40. The area of the two long sides of wall is  $2 \times (4 \times 2.5) = 20 \text{ m}^2$ . the amount of litres of paint required to paint the wall = 2 L
- b. area of ceiling =  $4 \times 3 = 12 \text{ m}^2$ ; paint needed =  $\frac{1}{10} \times 12 = 1.2 \text{ L}$ ; amount of paint remaining in the paint =  $3.8 - (2 + 1.2) = 0.6 \text{ L}$

## SEA Practice Test 8 - Mathematics (75 minutes)

### Revision Definition

To measure the volume of a cylinder, cone, cube, and cuboid, specific formulas can be used. For a cylinder, the volume is calculated by multiplying the area of the base ( $\pi r^2$ ) by the height ( $h$ ). In the case of a cone, the formula is  $1/3$  times the area of the base ( $\pi r^2$ ) multiplied by the height ( $h$ ). For a cube, the volume is determined by cubing the length of one side ( $a^3$ ). Lastly, to find the volume of a cuboid, one would multiply the length, width, and height together ( $l \times w \times h$ ). By applying these formulas correctly, the volume of each shape can be accurately measured.

**Question:** What is the volume of a cube with a side length of 5 inches?

**Answer:**

The volume of a cube with a side length of 5 inches is 125 cubic inches. (This is calculated by multiplying the side length by itself three times:  $5 \times 5 \times 5 = 125$ )

### Study Tip

One effective study tip for Mathematics is to practice solving problems consistently. By dedicating time each day to work on math problems, you can reinforce your understanding of key concepts and improve your problem-solving skills. Additionally, reviewing past assignments, quizzes, and tests can help you identify areas where you may need extra practice or clarification.

If you encounter a particularly challenging problem, don't hesitate to seek help from your teacher, classmates, or online resources. Collaborating with others can provide different perspectives and insights that may help you tackle difficult math problems more effectively. By staying organized, setting realistic goals, and seeking support when needed, you can enhance your math skills and succeed in your studies.