

SAMPLE SCHOLARSHIP EXAM MATHEMATICS

INSTRUCTIONS

- 1. There are 40 questions in this sample test. You have 40 minutes to complete this test.*
- 2. With each question there are four possible answers A, B, C or D. For each question you are to choose the ONE answer you think is most correct.*
- 3. If you decide to change an answer, rub it out completely and mark your new answer clearly.*

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1. Billy earns \$48 for 4 hours of work. At that rate, how long would he have to work to earn \$216?

A. 4 hours
B. 4.5 hours
C. 12 hours
D. 18 hours

2. Kwame was at the sports club today. He stayed there for $4\frac{1}{2}$ hours, and left at 6:40 pm. What time did he arrive at the sports club?

A. 10:10 pm
B. 12:10 pm
C. 1:10 pm
D. 2:10 pm

3. $\Delta \div 4 = 60 \div 12$

 $\Delta =$

A. 16
B. 18
C. 20
D. 52

4. A pot weighs 690g. When the pot is three quarters full of soup, the pot and soup together weigh 990g.

If the pot is one quarter full of soup, the pot and the soup together weigh

A. 100g
B. 790g
C. 800g
D. 890g



5. Which one of the numbers in the list

2, 4, 6, 8, 10, 12, 14, 16

should be removed so that the average of the remaining numbers is 8?

- A. 8
B. 10
C. 12
D. 16
6. Anna sets out even numbers in the following pattern of rows and columns. The pattern continues down the page.

		Column:				
		a	b	c	d	e
	A	1	3	5	7	9
	B	11	13	15	17	19
Row:	C	21	23	25	27	29
	D	31
	E

The number 69 is in

- A. Row F, column e
B. Row G, column e
C. Row H, column e
D. Row I, column e
7. At the 2008 Summer Olympics, Australia was represented by 433 athletes. This was 4% of the total number of athletes.

How many athletes were there altogether?

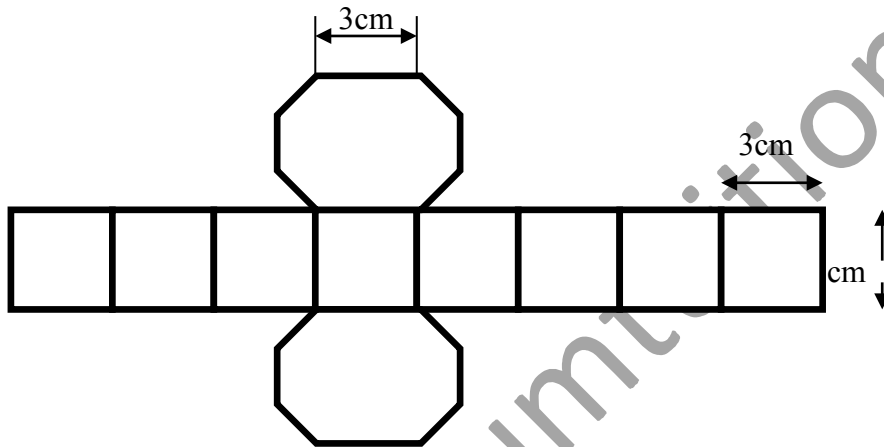
- A. 1,732
B. 10,825
C. 10,392
D. 11,028



8. Note $4.85 \times 100 = 485$
So $4.85 \times 10,000 =$

A. 485
B. 4,850
C. 48,500
D. 485,000

9. This is the net of a closed regular octagon box.



The volume of a regular octagon box can be found by multiplying the area of the base times height. A general formula for the area of a regular octagon is:

$$\text{Area (A)} = (\text{length of 1 side})^2 \times 4.828$$

The volume of the completed box will be

A. 14.48cm^3
B. 43.45cm^3
C. 130.35cm^3
D. 391.05cm^3

10. Tiger put 14 golf balls into the first box, 21 golf balls in the second box, 28 golf balls in the third box, and 35 golf balls in the fourth box. If this pattern continues, how many golf balls will Tiger put in the fifth and sixth boxes altogether?

A. 42
B. 49
C. 56
D. 91

Questions 11 -12 refer to the following information:

In the addition square below some of the numbers are missing.

The missing numbers are integers between 1 and 19.

The numbers in each row add up to totals to the right.

The numbers in each column add up to the totals along the bottom.

The diagonal lines also add up the totals to the right.

						36
	14	19			2	55
	13		18	4	14	61
	18	5	N	4	9	51
	2			5	15	40
	M	7	2	7	19	44
	56	49	63	24	59	65

11. The number at M will be

- A. 7
- B. 8
- C. 9
- D. 10

12. The number at N will be

- A. 14
- B. 15
- C. 16
- D. 19



Questions 13 -15 refer to the following information:

In the math square puzzle below some of the numbers are missing.

The numbers 1 through 9 must be used to complete the equations.

Each number is only used once. Each row is a math equation. Each column is a math equation. Remember that multiplication and division are performed before addition and subtraction.

	P	×		+		18
	−		+		+	
		+	Q	÷		6
	×		−		−	
		−		−	R	1
	−34		4		10	

13. The number at P will be

- A. 2
- B. 5
- C. 8
- D. 9

14. The number at Q will be

- A. 3
- B. 4
- C. 6
- D. 9

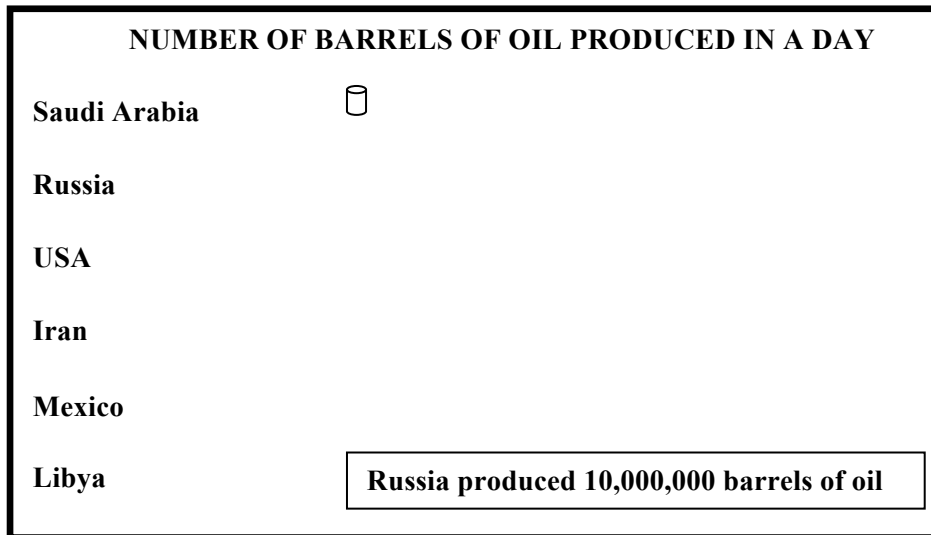
15. The number at R will be

- A. 1
- B. 2
- C. 3



D. 7

Questions 16-18 refer to the following information:



16. Which country produced eight times as many barrels of oil as Libya?

- A. Saudi Arabia
- B. Russia
- C. USA
- D. Iran

17. How many barrels of oil did Iran produce?

- A. 425,000
- B. 850,000
- C. 4,250,000
- D. 8,500,000

18. How many more barrels did The USA produce than Mexico?

- A. 950,000
- B. 4,250,000
- C. 4,750,000
- D. 9,500,000



19. John wants to lay a new carpet in his sitting room. The floor of the sitting room is rectangular shaped with a length of 5 metres and a width of 4 metres. Room carpet costs \$30 per square metre.

Which calculation gives the total cost of carpeting the floor (in dollars) of the sitting room?

- A. $\$30 \times (5 \times 4)$
- B. $\$30 \times (5 \div 4)$
- C. $\$30 \times (5 \times 5)$
- D. $\$30 \times (5 \div 5)$

20.

	12	14	
	7	6	

If the pattern in the four boxes above is repeated in the four boxes below

	6	8	
	N	3	

then N =

- A. 1
- B. 2
- C. 3
- D. 4



21. Which calculation gives the answer 24 by only using the numbers 8,8,3,3?

- A. $8 \div (3 - \frac{3}{8})$
- B. $8 \div (3 - \frac{8}{3})$
- C. $8 \times (\frac{3}{8} - 3)$
- D. $8 \times (\frac{8}{3} - 3)$

22. Using the number “8” eight times, which of the calculations below gives the answer as 1,000?

- A. $(8+8)(8 \times 8) - (8 + 8) \div 8) - 8$
- B. $(8 \div 8)(8 \div 8) - (8 + 8) \div 8) - 8$
- C. $8+8-8+88+888$
- D. $8+8+8+88+888$

23. Henry’s mother arrived in Adelaide, Australia from Los Angeles, California at 9pm on Tuesday after a 26 hour trip. The flight began at 2:30am on Monday, Los Angeles time.

What is the time difference between Los Angeles and Adelaide?

- A. Los Angeles time is $14\frac{1}{2}$ hours behind Adelaide time
- B. Los Angeles time is $14\frac{1}{2}$ hours ahead of Adelaide time
- C. Los Angeles time is $16\frac{1}{2}$ hours behind Adelaide time
- D. Los Angeles time is $16\frac{1}{2}$ hours ahead of Adelaide time

24. Martino buys a textbook online for \$75.30. If shipping and handling are an additional 20% of the price, how much shipping and handling will Martino pay?

- A. \$15.06
- B. \$ 16.06
- C. \$60.24
- D. \$90.36



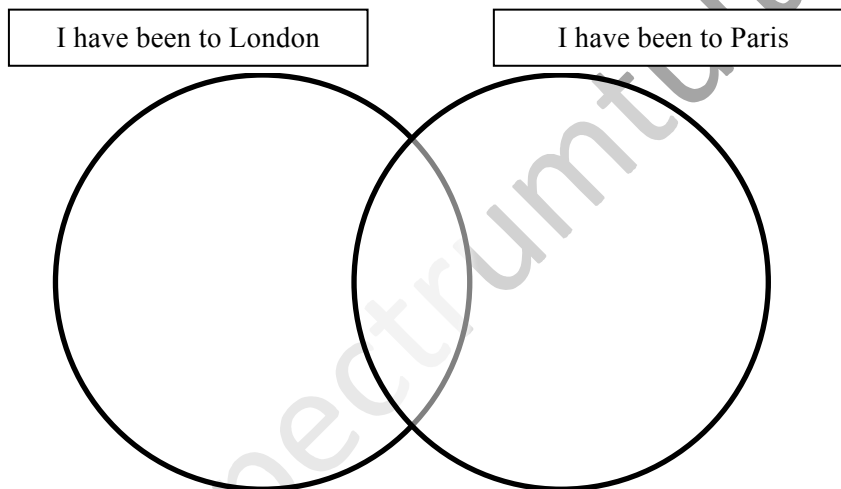
25. Which coupon will save Ali the most money on a pair of Everlast boxing gloves originally priced at \$89.95?

- A. \$20.00 off any Everlast boxing gloves
- B. 20% off any Everlast boxing gloves
- C. \$30.00 off any Everlast boxing gloves
- D. 30% off any Everlast boxing gloves

Question 26-28 refer to the following information

Of the students in Grade 7 at Eastside High, 16 have been to London, UK. 14 students have been to Paris, France. 10 students have been to both London and Paris.

Hint: Complete the Venn diagram below to help you solve the questions.



26. How many students have been to London but not Paris

- A. 6
- B. 14
- C. 16
- D. 20

27. How many students have been to Paris but not London?

- A. 4
- B. 14
- C. 16
- D. 20

28. How many students have been to London, Paris or both?

- A. 4
- B. 14
- C. 16
- D. 20

29. Which of these measurements is the highest, 1 decilitre, 95 millilitres or 9.5 centilitres

- A. 1 decilitre
- B. 9.5 centilitres
- C. 95 millilitres
- D. None of the above

30. Which measurement is most precise, 63m, 93.71m, and 85.794m?

- A. 63m
- B. 93.71m
- C. 84.795m
- D. All of the above

31. $918 \div 306 = 2,754 \div \Delta$
 $\Delta =$

- A. 3
- B. 612
- C. 918
- D. 306



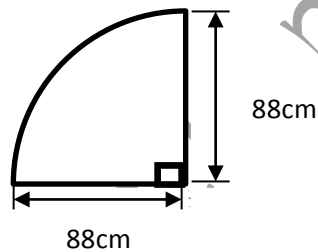
32. It takes one man one day to dig a $4\text{m} \times 4\text{m} \times 4\text{m}$ hole. How long does it take 4 men working at the same rate to dig a $16\text{m} \times 16\text{m} \times 16\text{m}$ hole?

- A. 16days
- B. 36days
- C. 64days
- D. 256days

33. Four persons share a motorcycle for a period of two years and the mean number of kilometres travelled by each person is 160 per month. How many kilometres will be travelled in two years?

- A. 640km
- B. 6,400km
- C. 7,680km
- D. 15,360km

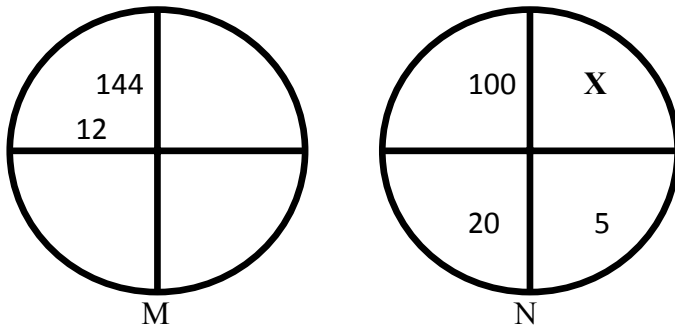
34. The area of this quadrant shaped shower tray



in square centimetres (cm^2), is about

- A. 550cm^2
- B. $6,000\text{cm}^2$
- C. $24,300\text{cm}^2$
- D. $48,600\text{cm}^2$

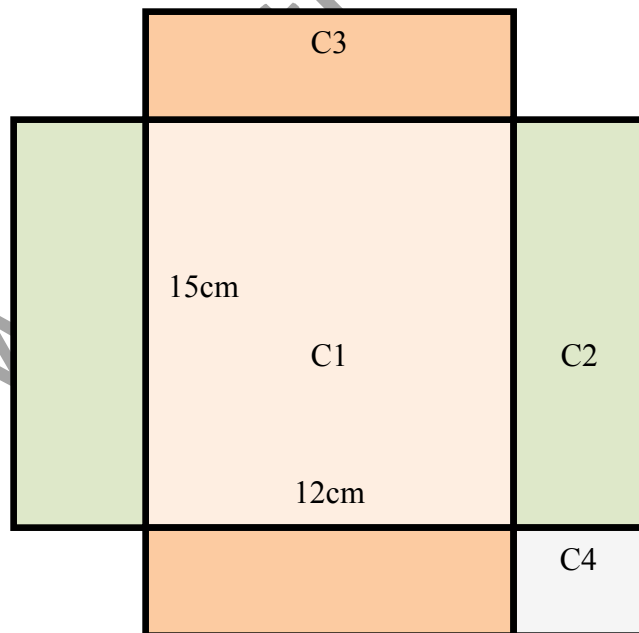
35. The number pattern in circle **M** is repeated in circle **N**.



What is the value of **X**?

- A. 1
- B. 8
- C. 10
- D. 14

36. A rectangular piece of cardboard has had four small squares cut off (4 pieces the sizes of C4 have been cut off). The remainder is then cut to make a box that is 15cm by 12cm with a volume of 540cm^3 .



What is the area of the original piece of cardboard?

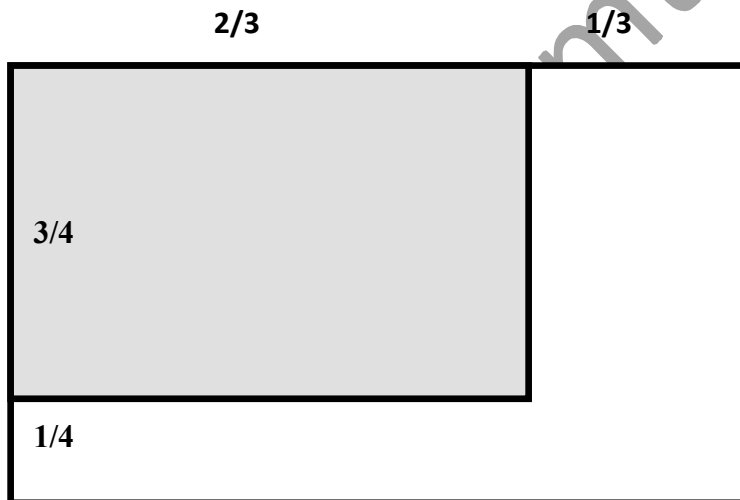


- A. 360cm^2
- B. 378cm^2
- C. 540cm^2
- D. 560cm^2

37. A University farm grows 440 kilograms of oranges. They sell these oranges to a supermarket that divides them into 7 kilogram and 4 kilogram paper bags. If the supermarket uses the same number of 7 kg paper bags as 4 kg paper bags, then how many paper bags were used at the supermarket to bag these oranges?

- A. 20
- B. 40
- C. 80
- D. 86

38. Some portion of a cardboard is cut off to generate an L-shaped figure. The shaded portion in the diagram below represents the portion that was cut off.



What portion of the total cardboard was cut off?

- A. $\frac{1}{5}$
- B. $\frac{4}{5}$
- C. 50%
- D. 65%

39. $\frac{4}{\quad} = \frac{\quad}{36}$

$\square =$

- A. 6
- B. 12
- C. 18
- D. 72

40. Kofi is going to Kasoa 50 kilometres away.

At what speed will he have to travel to get there 40 minutes

- A. 800 kilometres per hour
- B. 125 kilometres per hour
- C. 75 kilometres per hour
- D. 35 kilometres per hour



Congratulations On Completing The Exam!

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