SOUTHERN AFRICAN PRIMARY MATHEMATICS OLYMPIAD FEMSSISA

GRADE 6

E-mail : Info@saolympiads .co.za website: www.saolympiads.co.za

DATE: 15 – 19 AUGUST 2022

TIME: 90 MINUTES

INSTRUCTIONS:

1. This booklet has 15 multiple choice and 5 open ended questions.
2. Use the answer sheet provided.

   Circle the letter corresponding to your answer.
3. All working details must be done in the space provided.
4. Calculators are not permitted.
5. Diagrams are not necessarily drawn to scale.
6. The first 15 problems carry one mark each and the next 5 carry 2 marks each.
7. You have 90 minutes for the paper which works out to an average of 4.5 minutes per question.
8. Read the questions carefully before answering.
9. Visit the websites: www.saolympiads.co.za.

GRADE SIX

1. Evaluate: 16 - $\frac{1}{4}$ x 16

   (A) 4 (B) 8 (C) 12 (D) 16

2. What is (13 ÷ 7) correct to 2 decimal digits?

   (A) 1.86 (B) 1.85 (C) 1.84 (D) 1.83

3. Evaluate 156 x 156 - 156 x 155

   (A) 157 (B) 156 (C) 155 (D) 154

4. In the following addition problem find A x B x C =…..

$$\begin{array}{r} \text{B C} \\ \text{A B C} \\ \underline{\text{B C}} \\ 6\ 9\ 2 \end{array}$$

   (A) 150 (B) 145 (C) 140 (D) 120

5. A vendor sold $\frac{1}{4}$ of the pocket of potatoes. After selling 35 more pockets the vendor had $\frac{1}{3}$ of the pockets left. How many pockets did the vendor start with?

   (A) 108 (B) 96 (C) 84 (D) 72

6. Jakes beat the 800 metres record which was 1 minute 47 seconds by 2.4 seconds. What was the new record in seconds?

   (A) 103.6 (B) 104.6 (C) 107.4 (D) 109.4

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7. When the 4-digit number 3434m3 is divided by 12 the remainder is 1. The value of m is ...

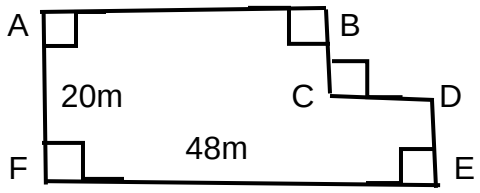
(A) 5 (B) 4 (C) 3 (D) 2

8. Determine the fraction x such that $\frac{2}{3}$ is midway between x and $\frac{7}{8}$.

(A) $\frac{7}{16}$ (B) $\frac{3}{8}$ (C) $\frac{5}{12}$ (D) $\frac{11}{24}$

9. Determine the area in square metres of the following figure ABCDEF,

If BC = CD = DE.



(A) 720 (B) 760 (C) 860 (D) 960

10. Patricia buys items at 5 items for 24 coins. She sells them at 6 for 35 coins. How many items must she sell to make a profit of 620 coins?

(A) 600 (B) 640 (C) 680 (D) 720

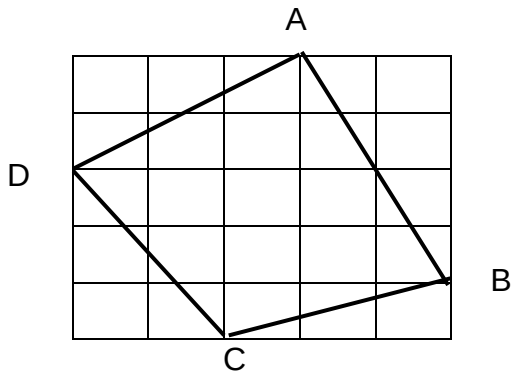
11. Write down the last 3 digits of this product of 77777 x 99999.

(A) 723 (B) 623 (C) 223 (D) 233

12. Barry is the same age as Alex was 5 years ago. The combined ages of Barry and Alex in 5 years time will be 60. What is Alex's age?

(A) 35 (B) 30 (C) 25 (D) 20

13. Determine the area of ABCD if each square is 1cm^2.



(A) 10 (B) 11.5 (C) 12 (D) 13.5

14. It takes 16 minutes to cut a log into 5 pieces. Dane cuts a similar log into 15 pieces working at the same rate. At what time did Dane start cutting the log if he finished the job at 09:30 without having any rest?

(A) 08:34 (B) 08:30 (C) 08:24 (D) 08:20

15.

Five houses are on the same straight road. The blue house is 250m to the right of green house. The red house is 50m to the left of the white house. The pink house is 150m to the right of the red house and 300m to the left of the blue house.
How far and in which direction in metres is the green house from the red house?

A) 200 left (B) 200 right (C) 150 right (D) 150 left

16. An equal number of 125ml and 750ml cans were filled from a 20 litres bottle. How many ml was left? (Answer in ml)

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17. My watch loses 10 minutes in every hour. The time was correct at 08:00. What was the actual time when the watch shows 13:00?

18. In a basketball match, points were scored in only 1's; 2's and 3's. Aces scored 95 points from 45 shots. How many 3 pointers did the team score if they scored twice the number of 2 pointers as the 1 pointers?

19. In the set of plastic numbers from 10 to 30 the sum of two numbers is found such that it is divisible by 9. How many such combinations are there?

20. Calculate the sum of these fractions: $\frac{1}{3.5} + \frac{1}{5.7} + \frac{1}{7.9} + \cdots . + \frac{1}{19.21}$

MARKS: 1-15: 15 X 1 = 15
16-20: 5 X 2 = 10