

GUYANA
MINISTRY OF EDUCATION
NATIONAL GRADE SIX ASSESSMENT

MATHEMATICS

Paper 01

AUGUST 5, 2021 (a.m.)

1 hour and 10 minutes

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This test has 40 questions. You have 1 hour and 10 minutes to answer them.
2. Each question has **four** suggested answers: (A), (B), (C) and (D). Read each question carefully, then choose the correct answer.
3. On your answer sheet, find the number that matches the question you intend to answer.
4. Shade the circle with the letter, (A), (B), (C) or (D), that matches your answer for each question.

Sample Question

The sum of 4 and 5 is

- (A) 1
(B) 9
(C) 20
(D) 45

Sample Answer



The correct answer is "9", so (B) has been shaded.

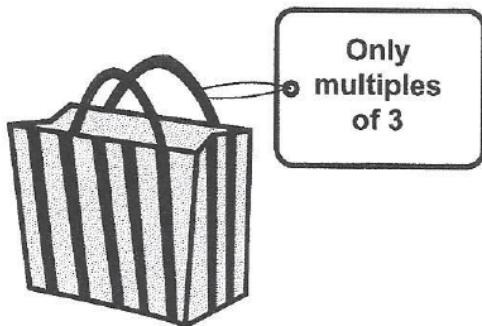
5. If you want to change your answer, erase it completely before you fill in your new choice.
6. When the supervisor tells you to begin, turn the page and work as quickly and as carefully as you can.
7. If you try a question and find that you cannot answer it, go on to the next one. You may return to that question later.
8. You must **not** use calculators for this test. Rough work may be done in this booklet.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

1. If $X = \{1, 3, 5, 7, 9\}$, which of the following sets is equal to X ?
- (A) $\{2, 3, 5, 7, 9\}$
(B) $\{9, 3, 1, 5, 7\}$
(C) $\{2, 4, 6, 8, 10\}$
(D) $\{4, 6, 8, 9, 10\}$
2. If $M = \{11, 13, 17, 19\}$, then the **best** description of Set M is
- (A) odd numbers between 10 and 20.
(B) even numbers between 10 and 20.
(C) prime numbers greater than 10 but less than 20.
(D) composite numbers greater than 10 but less than 20.
3. Which of the following numbers has the digit 8 in the hundreds place?
- (A) 5 608
(B) 8 790
(C) 9 850
(D) 9 780
4. Which of the following numbers is a common factor of 24 and 36?
- (A) 8
(B) 12
(C) 24
(D) 72

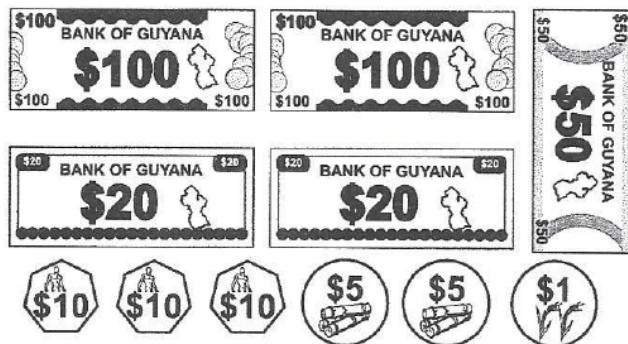
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Question 5 refers to the following diagram which shows a bag of multiples.



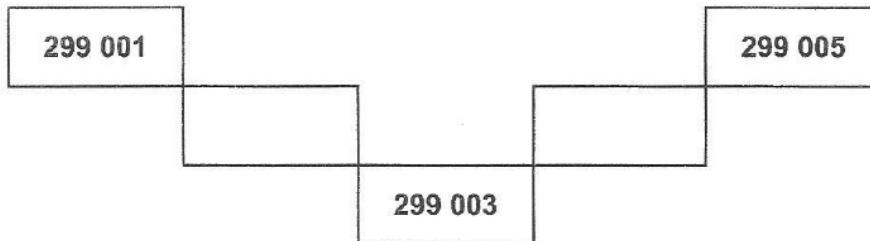
5. Devendra pulled a number from the bag. The number was **most** likely
- (A) 72
 - (B) 76
 - (C) 89
 - (D) 92

Question 6 refers to the following diagram which shows the number of notes and coins in Jessica's piggy bank.



6. How much money does Jessica have altogether?
- (A) \$281
 - (B) \$331
 - (C) \$431
 - (D) \$662

Question 7 refers to the following diagram which shows a pattern.



7. Which two numbers will correctly complete the pattern above?

- (A) 200 010 and 200 040
- (B) 290 002 and 299 004
- (C) 299 020 and 299 040
- (D) 299 002 and 299 004

Question 8 refers to the following bill which shows the amount of money Mrs Singh spent on some items.

| Shopping Bill | |
|-----------------|-------------------|
| 1 skirt | \$1 875.50 |
| 1 pair of shoes | \$4 250.75 |
| 2 blouses | <u>\$2 980.00</u> |
| TOTAL | \$ _____ |

8. How much money did Mrs Singh spend on the items altogether?

- (A) \$ 91.06
- (B) \$ 910.73
- (C) \$ 9 006.00
- (D) \$ 9 106.25

GO ON TO THE NEXT PAGE

9. Which of the following is an equivalent fraction of $\frac{3}{8}$?

(A) $\frac{4}{16}$

(B) $\frac{9}{24}$

(C) $\frac{15}{42}$

(D) $\frac{8}{12}$

10. When converted to an improper fraction, $5\frac{3}{4} = \frac{\square}{4}$. The number that should be in the box is

(A) 15

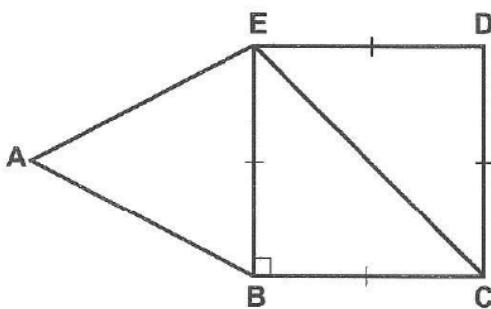
(B) 20

(C) 23

(D) 24

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Questions 11 and 12 refer to the following diagram which shows a figure made up of 7 connected lines.



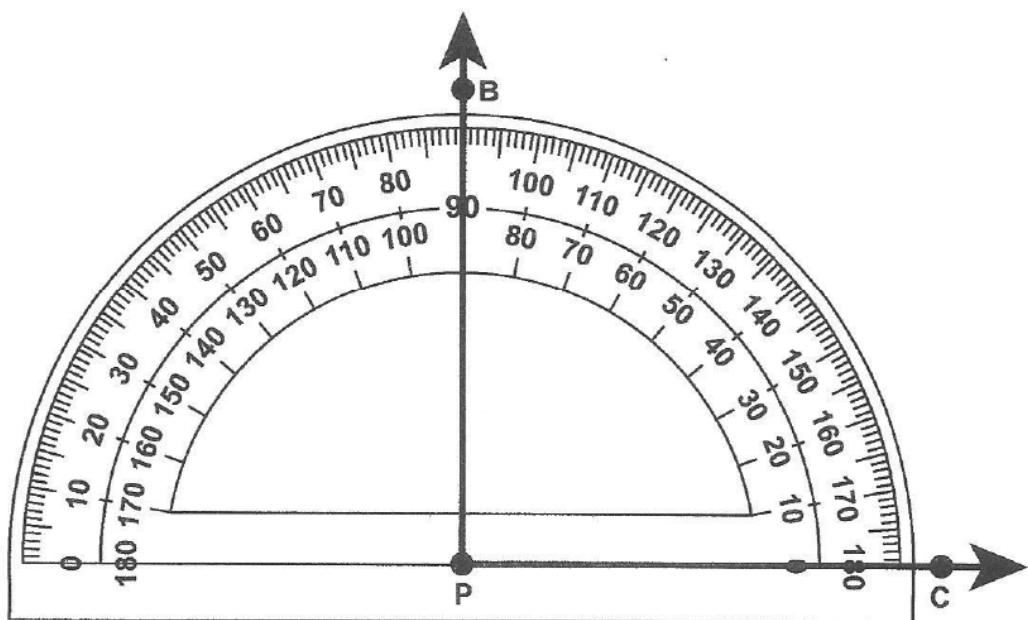
11. Which two lines in the diagram above are perpendicular?

- (A) BC and CD
- (B) AB and BC
- (C) DE and BC
- (D) DE and EC

12. Which two lines in the diagram above are parallel?

- (A) AB and BC
- (B) AE and BC
- (C) DE and EB
- (D) BE and CD

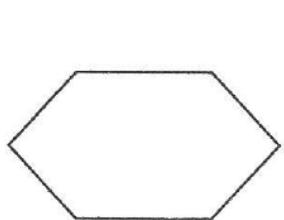
Question 13 refers to the following diagram which shows Angle BPC .



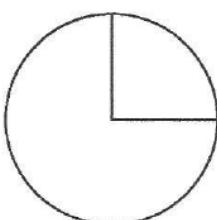
13. The type of angle shown in the diagram above is

- (A) a right angle.
- (B) an acute angle.
- (C) a straight angle.
- (D) an obtuse angle.

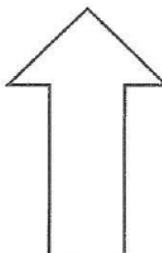
14. Which of the following figures has more than one line of symmetry?



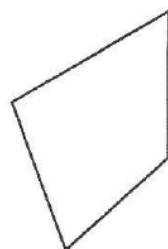
(A)



(B)



(C)



(D)

15. How many grams are in 2 kilograms?

- (A) 20
- (B) 200
- (C) 220
- (D) 2 000

16. $\frac{5}{20}$ expressed as a percentage is

- (A) 5%
- (B) 20%
- (C) 25%
- (D) 50%

Question 17 refers to the following Sets, W , X and Y .

$$W = \{2, 3, 5, 7\}$$

$$X = \{4, 6, 8, 9, 10\}$$

$$Y = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

17. Which of the following statements regarding Sets W , X and Y is true?

- (A) $X \subset Y$
- (B) $W \subset Y$
- (C) $Y \subset W$
- (D) $X \subset W$

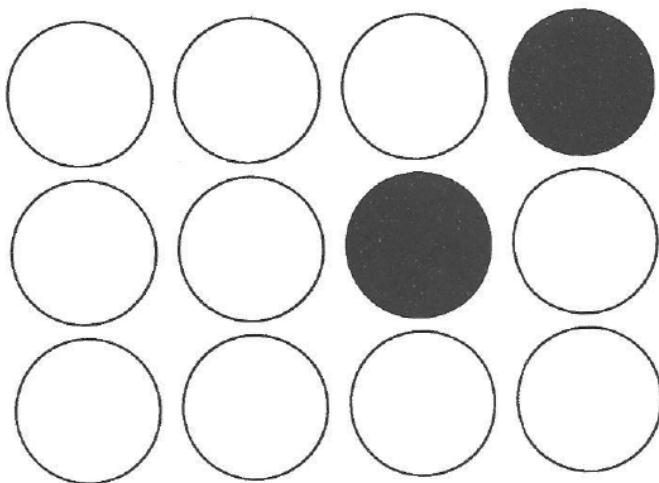
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18. 7 thousands + 5 tens + 2 hundredths is the same as
- (A) 705.2
(B) 7 205.0
(C) 7 005.02
(D) 7 050.02
19. The average of 7 numbers is 32. If the sum of the first 6 numbers is 156, what is the 7th number?
- (A) 6
(B) 68
(C) 124
(D) 224
20. $(40 - 24) \div 2 + 6 =$
- (A) 11
(B) 14
(C) 22
(D) 34
21. In which of the following options are the numbers arranged in order from the **smallest to the largest**?
- (A) 7.01, 0.71, 0.701
(B) 7.01, 0.701, 0.71
(C) 0.071, 0.71, 0.701
(D) 0.071, 0.701, 0.71

22. Josh had \$360. He took $\frac{5}{9}$ of his money to buy a toy. How much did he spend on the toy?

- (A) \$160
- (B) \$200
- (C) \$300
- (D) \$560

Question 23 refers to the following diagram which shows 12 identical circles.

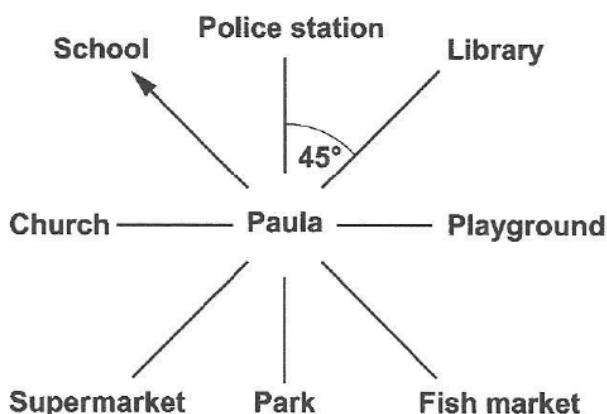


23. How many **more** circles must be shaded so that $\frac{2}{3}$ of the total number of circles is shaded?

- (A) 3
- (B) 4
- (C) 6
- (D) 8

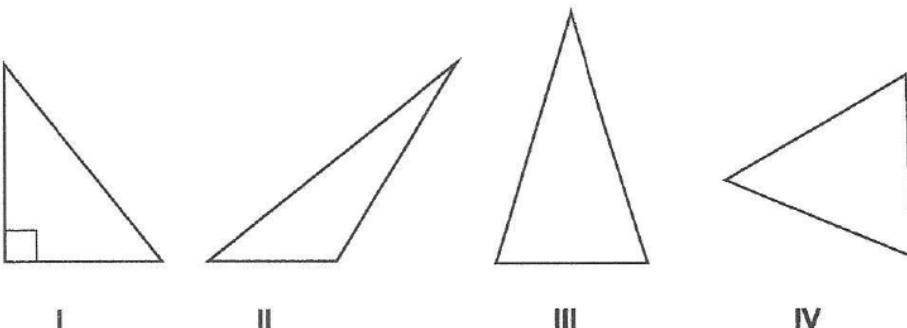
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Question 24 refers to the following diagram which shows the direction of places in the community from where Paula stands. The angles between consecutive places are equal.



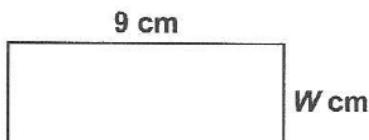
24. Paula is facing the school. She turns through an angle of 135° in a **clockwise** direction. Which of the following places does she now face?
- (A) Park
 - (B) Playground
 - (C) Fish market
 - (D) Supermarket

Question 25 refers to the following diagram of 4 triangles.



25. Which of the triangles above are acute-angled triangles?
- (A) I and II only
(B) III and IV only
(C) II, III and IV only
(D) I, II, III and IV
26. Two stones, A and B, have a **total** mass of 60 kg. If Stone B is 20 kg, what is the mass, **in grams** (g), of Stone A?
- (A) 12 000
(B) 20 000
(C) 30 000
(D) 40 000

Question 27 refers to the following diagram which shows a rectangle of length 9 cm and width W cm.



27. The area of the rectangle is 36 cm^2 . What is the value of W ?
- (A) 4
(B) 6
(C) 8
(D) 9
28. Natasha bought a camera for \$2 500 at a store. She sold it for \$3 500. Her profit as a percentage of the cost price is
- (A) 10%
(B) 25%
(C) 35%
(D) 40%
29. In a box of 56 marbles, 32 of them are purple and the rest are red. What is the ratio of the number of red marbles to the number of purple marbles?
- (A) 3:4
(B) 3:7
(C) 4:3
(D) 4:7

GO ON TO THE NEXT PAGE

30. Marc bought a pair of jeans for \$1 000. Because the jeans were damaged, they were sold at a loss of 10% on the cost price. The selling price of the pair of jeans was
- (A) \$ 900
(B) \$ 980
(C) \$1 020
(D) \$1 100

Questions 31 and 32 refer to the following pictograph which shows the number of mangoes sold during one week.

| Day | Number of Mangoes Sold |
|-----------|------------------------|
| Monday | 1 |
| Tuesday | 4 |
| Wednesday | 2 |
| Thursday | 3 |
| Friday | 5 |

 represents 10 mangoes

31. How many more mangoes were sold on Friday than on Wednesday?
- (A) 3
(B) 8
(C) 20
(D) 30
32. On which two days were $\frac{3}{5}$ of the total mangoes sold?
- (A) Tuesday and Friday
(B) Thursday and Friday
(C) Tuesday and Thursday
(D) Tuesday and Wednesday

33. A box of sweets can be shared **equally** among 4, 5 or 8 persons. How many sweets are likely to be in the box?

- (A) 20
- (B) 32
- (C) 40
- (D) 48

Question 34 refers to the following pattern.

$$\frac{1}{3}, \quad \frac{3}{9}, \quad \frac{5}{15}, \quad \underline{\hspace{2cm}}, \quad \frac{9}{27}.$$

34. The missing fraction in the pattern is

- (A) $\frac{6}{21}$
- (B) $\frac{6}{18}$
- (C) $\frac{7}{24}$
- (D) $\frac{7}{21}$

35. James bought a belt and a wallet. The wallet cost 4 times as much as the belt. If the wallet cost \$1 800, how much did he pay for the belt and the wallet **altogether**?

- (A) \$ 450
- (B) \$1 350
- (C) \$2 250
- (D) \$3 600

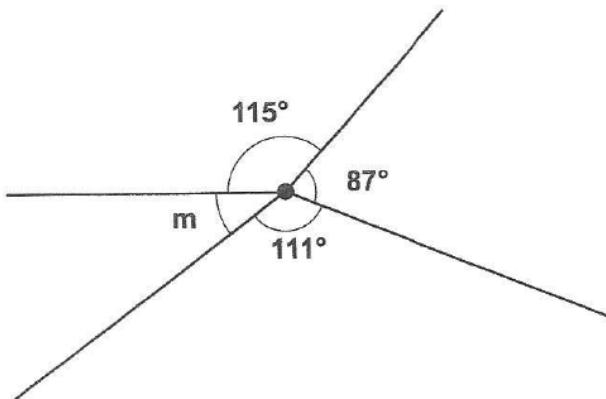
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Question 36 refers to the following table which shows the hourly rate earned by a clerk at a store.

| Day | Hourly Rate |
|-------------------------------|-------------|
| Weekday (Monday to Friday) | \$100 |
| Weekend (Saturday and Sunday) | \$200 |

36. In a certain week, Janet worked every weekday for 8 hours each day. If her total earnings for that week was \$5 000, how many hours did she work on the weekend?
- (A) 3
(B) 4
(C) 5
(D) 10

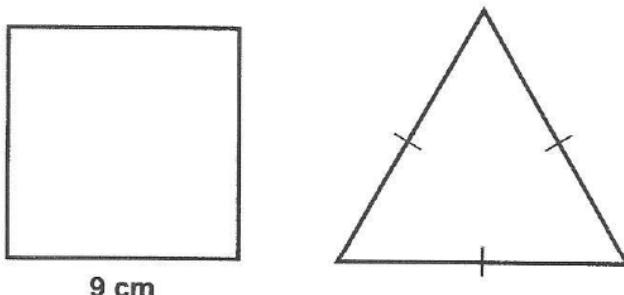
Question 37 refers to the following diagram which shows angles at a point.



37. What is the size of Angle m ?
- (A) 47°
(B) 65°
(C) 162°
(D) 245°

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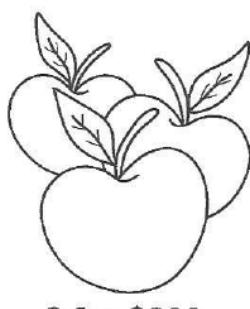
Question 38 refers to the following diagram which shows an equilateral triangle and a square. The 2 shapes both have the same perimeter.



38. The length of one side of the square is 9 cm. What is the length of each side of the equilateral triangle?

- (A) 3 cm
- (B) 9 cm
- (C) 12 cm
- (D) 36 cm

39. Apples are sold wholesale at 3 for \$200 as shown below.



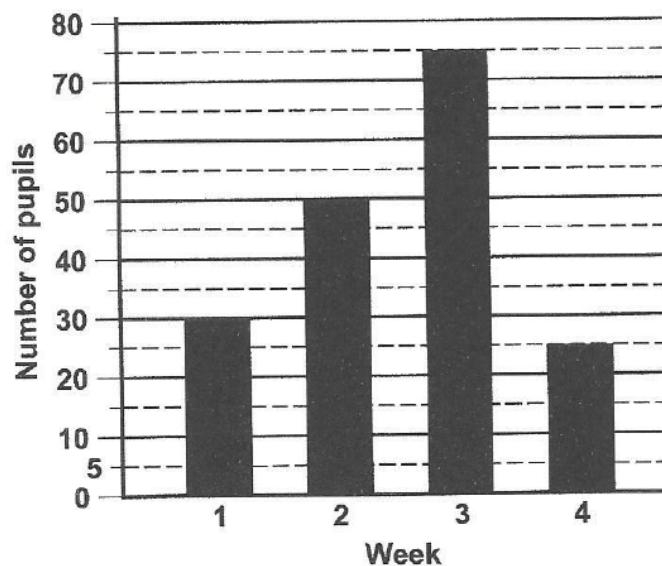
3 for \$200

Ajinkya buys 18 of the same apples and sells all of them at 3 for \$600. The amount of profit he gains is

- (A) \$1 200
- (B) \$1 800
- (C) \$2 400
- (D) \$3 600

GO ON TO THE NEXT PAGE

Question 40 refers to the following bar chart which shows the number of pupils who visited the museum over a four-week period.



40. Which of the following statements about the information represented on the bar chart is **correct**?
- (A) An average of 45 pupils visited the museum from Weeks 1 to 4.
 - (B) An average of 50 pupils visited the museum from Weeks 1 to 4.
 - (C) More pupils visited the museum in Weeks 1 and 2 than in Weeks 3 and 4.
 - (D) Half the number of pupils who visited the museum in Week 4 visited in Week 2.

END OF TEST

IF YOU FINISH BEFORE TIME IS UP, CHECK YOUR WORK ON THIS TEST.

**DO NOT
WRITE ON
THIS PAGE**

Prepared by

CARIBBEAN EXAMINATIONS COUNCIL