1. The value of the digit ‘7’ in the number 57382 is
   A. $7 \times 10^4$
   B. $7 \times 10^3$
   C. $7 \times 10^2$
   D. $7 \times 10^1$

2. Ken makes 5 cups of juice using 2 cups of orange concentrate and
   3 cups of water. How many cups of concentrate will he use in a
   similar mixture containing 12 cups of water?
   A. 8
   B. 18
   C. 20
   D. 60

3. After spending \(\frac{3}{4}\) of his weekly allowance Ben had $75 left. How much was his allowance for the week?
   A. $15
   B. $25
   C. $120
   D. $200

4. Calculate the difference between $10^4$ and $10^2$.
   A. 0
   B. 2
   C. 100
   D. 9900

5. Convert $20_{10}$ to a base 2 numeral.
   A. $10_2$
   B. $101_{12}$
   C. $1010_2$
   D. $10100_2$

6. A building with 20 floors has 20 windows on each floor. If it takes
   20 minutes to clean each window, how many minutes does it take to clean all the windows
   of the building?
   A. 40
   B. 400
   C. 800
   D. 8000

7. In a particular week, Mary
   worked 8 hours per day for 3
   days and 4 hours per day for 2
   days. She was paid $10 per hour.
   How much did she earn for that
   week?
   A. $120.
   B. $320.
   C. $400.
   D. $600.

8. Andrew went to the bank to
   change his US 50 cents for cash
   in Trinidad and Tobago currency.
   If the exchange rate for cash is
   US$1.00 = TT$6.00, how much
   TT money does he get for his 50-
   cents?
   A. $0.30
   B. $3.00
   C. $30.00
   D. $300.00
9. Glenn paid $460 for a CD-player. If this amount included Value Added Tax (VAT) of 15%, what was the price without VAT?

A. $69.
B. $391.
C. $400.
D. $445.

10. Merle borrows $5000 from a bank. The bank charges simple interest at a rate of 5% per annum on the loan. How much will Merle actually repay at the end of 2 years?

A. $250.
B. $500.
C. $5250.
D. $5500

12. The length of the arc AB in the figure above is represented by

A. \( \frac{90}{4 \times 360} \times \text{circumference} \)
B. \( \frac{90}{360} \times \text{circumference} \)
C. \( \frac{2 \times 90}{360} \times \text{circumference} \)
D. \( \frac{90}{4} \times \text{circumference} \)

13. A circular jogging track of diameter 14 m encloses a flower garden. The area of the flower garden, in m², is

A. 22
B. 44
C. 154
D. 616

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14. Calculate the perimeter, in metres, of the shape below.

\[ \text{Perimeter} = 2(4 + 3 + 7 + 2) = 22 \text{ m} \]

15. John walked a distance of 2 km in 20 minutes. At what speed in kilometres per hour, did he walk?

\[ \text{Speed} = \frac{2 \times 60}{20} = 6 \text{ km/h} \]

17. When expressed in kilometres, 6375m is equal to

A. 0.6375
B. 6.375
C. 63.75
D. 637.5

18. If \( 2y - 1 \leq 5 \), what is the largest possible value of \( y \) that will satisfy this inequality?

A. 2
B. 3
C. 5
D. 6

19. Estimate the area of the circle in \( \text{unit}^2 \).

The height, \( h \), in metres, of the tank shown above is

A. 5 m
B. 6 m
C. 20 m
D. 180 m
20. The diagram above shows a graph describing the journey made by a car in 5 hours. What is the distance travelled by the car after 4 hours?

A. 20
B. 40
C. 50
D. 100

22. Which set below represents the set of all integers from -1 to 2?

A. \{0, 1\}
B. \{0, 1, 2\}
C. \{-1, 0, 1\}
D. \{-1, 0, 1, 2\}

23. The arrow diagram above represents a mapping which is

A. one to one
B. one to many
C. many to one
D. many to many

21. From the Venn diagram above, list the elements in A'.

A. \{6, 8\}
B. \{2, 3, 5\}
C. \{1, 2, 3, 4, 5\}
D. \{2, 3, 5, 6, 8\}

24. Simplify $6a + 7b - 2b + 5b$.

A. 6a
B. 16ab
C. 13ab - 7b
D. 6a + 10b

25. If $2(x - 4) = 10$, then $x =$

A. 1
B. 3
C. 7
D. 9

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26. The points (1, 1) and (2, 3) both lie on the line with equation

A. \( y = x \)  
B. \( y = x + 1 \)  
C. \( y = 2x \)  
D. \( y = 2x - 1 \)

27. ABCD is a rectangular swimming pool, as shown. If \( AB = 8 \) m and \( BC = 6 \) m, calculate the distance across the pool from A to C.

A. 9 m  
B. 10 m  
C. 11 m  
D. 14 m

28. When simplified \((a + 5)(a - 3) =\)

A. \( a^2 - 8a - 15 \)  
B. \( a^2 + 2a + 15 \)  
C. \( a^2 - 8a + 15 \)  
D. \( a^2 + 2a - 15 \)

29. If \( x = -2 \), then \( 2x^3 \) is equal to

A. -16  
B. -8  
C. 8  
D. 16

30. If a pineapple costs \( p \) and a mango costs \( q \), write an algebraic expression, in dollars, in terms of \( p \) and \( q \) for the total cost of 5 pineapples and 3 mangoes.

(A) \( p + q \)  
(B) \( 8pq \)  
(C) \( 5p + 3q \)  
(D) \( 15pq \)

31. On the graph below, \( \triangle ABC \) is mapped on to \( \triangle A'B'C' \) after undergoing a transformation. The transformation can best be described as a

A. translation in the x-direction  
B. reflection in the x-axis  
C. translation in the y-direction  
D. reflection in the y-axis
12. What is the value of $x$, if \[ \frac{4}{12} = \frac{2}{x} \]?

A. 2
B. 3
C. 6
D. 9

34. The parallel lines in the quadrilateral below are

A. AB and DC
B. AB and BC
C. AD and BC
D. AD and DC

35. A box contains 3 green bottles, 4 red bottles and 5 yellow bottles. Calculate the probability that a bottle chosen at random is red?

A. \( \frac{4}{12} \)
B. \( \frac{4}{8} \)
C. \( \frac{4}{12} \)
D. \( \frac{3}{4} \)

According to the graph above, how many books did Linda and Pam read together?

A. 5
B. 7
C. 10

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36. A survey conducted with 100 students about the type of transport they used to go to school revealed the following:

<table>
<thead>
<tr>
<th>Mode of Transport</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus</td>
<td>10</td>
</tr>
<tr>
<td>Car</td>
<td>15</td>
</tr>
<tr>
<td>Maxi Taxi</td>
<td>50</td>
</tr>
<tr>
<td>Walk (By foot)</td>
<td>25</td>
</tr>
</tbody>
</table>

Which diagram below best represents the information?

A. [Diagram A]

B. [Diagram B]

C. [Diagram C]

D. [Diagram D]

37. The frequency polygon below shows the number of days off that a student takes from school over a four month period.

In which month did the student take the most days off from school?

A. December
B. November
C. October
D. September

38. In the triangle above \( AB \neq BC \). Which of the following is true?

A. \( x = 90^\circ \)
B. \( x = y \)
C. \( x + y = 90^\circ \)
D. \( x + y = 180^\circ \)
Questions 39 and 40 are based on the information presented in the graph below.

The chart below shows the ages of students in the lower Forms at Elton Brown High School.

39. What is the modal age of students in the lower school?

   A. 11  
   B. 13  
   C. 14  
   D. 15  

40. How many students are there in the lower school?

   A. 50  
   B. 65  
   C. 120  
   D. 200  

END OF TEST