

First question : complete :

- a) If $3X + 7 = 19$, $X \in \mathbb{N}$, then $X = \dots\dots\dots$
- b) The additive neutral elemnt in \mathbb{N} is $\dots\dots\dots$
- c) The multiplicative neutral element in \mathbb{N} is $\dots\dots\dots$
- d) If $9 \times 13 = 13 \times X$ then $X = \dots\dots\dots$
- e) $7 \times 0 = \frac{\dots\dots}{9} = \dots\dots\dots$
- f) An odd numbers + An even number = $\dots\dots\dots$ number
- g) The sum of two an odd numbers = $\dots\dots\dots$ number
- h) An odd number \times an even number = $\dots\dots\dots$ number
- i) If X an odd number , then $X + 2$ is $\dots\dots\dots$ number
- j) If x an odd number , then $X - 1$ is $\dots\dots\dots$ number
- k) The perimeter of square whose side length is $M = \dots\dots\dots$
- l) If the perimeter of a rectangle 16 cm , if its length is Y cm , then its width
= $\dots\dots\dots$
- m) The circle whose diameter length is 14 cm , its circumference = $\dots\dots$ cm
- n) Twice a number K is $\dots\dots\dots$
- o) The area of square whose its diagonal 10 cm . is $\dots\dots\dots$ cm
- p) If $A (3 , 2)$ and $B (3 , 6)$, then the coordinates of the midpoint \overline{AB} is
($\dots\dots$, $\dots\dots$)
- q) $74 \times (73 + 27) = 74 \times \dots\dots\dots = \dots\dots\dots$
- r) The number of symmetry axes of an equilateral triangle = $\dots\dots\dots$
- s) The number of symmetry axes of an isosceles triangle = $\dots\dots\dots$
- t) The radius of the circle = $\frac{\dots\dots\dots}{2\pi}$

u) The number of symmetry axes of the square =

v) The number of symmetry axes of the rectangle =

w) The diameter of the circle = $\frac{C}{\dots\dots\dots}$

x) The circumference of the circle whose its diameter 14 cm =

$$(\pi = \frac{22}{7})$$

y) The number of symmetry axes of the rhombus =

z) The square whose perimeter is 20 cm , its area = cm²

aa)Shorouk saved X pounds , her father gave her 10 pounds, then she has
..... pounds

bb) The sum of two numbers is 20 one of them is Z then the other =
.....

cc)If we add 3 to twice of the number X , then we shall get
.....

dd) If we subtract 8 from third of the number Y we shall get

ee)Add 5 to double of a number Y =

ff) If we multiply 5 to the numer X then we subtract from the product 6 ,
We shall get

gg) 1 , 4 , 8 , 13 , (in the same pattern)

hh) The area of rhombus = $\frac{1}{2} \times \dots\dots\dots \times \dots\dots\dots$

ii) The area of square = \times

jj) The circumference of the circle = $2 \times \dots\dots\dots \times \pi$

kk)The additive neutral element is

ll) Subtract 4 from the double of a number x =

mm) If $X = \{ X : X \in \mathbb{N}, 3 < X \leq 6 \}$, then $X = \dots\dots\dots$

nn) If $Z + 3 = 9$, $Z \in \mathbb{N}$, then $Z = \dots\dots\dots$

oo) Adding 5 to twice of the number X is $\dots\dots\dots$

pp) The area of rhombus is 28 cm^2 , if the length of one of its diagonals is 7 cm , then the length of the other diagonal is $\dots\dots\dots \text{cm}$

second question : choose the correct answer :

a) The diameter length of circle whose circumference = 88 equals $\dots\dots\dots \text{cm}$

$$\left(\pi = \frac{22}{7} \right)$$

(28 or 14 or 7 or 21)

b) The next number in the pattern $1, 3, 9, 27, \dots\dots\dots$

(30 or 33 or 36 or 81)

c) If we subtract 4 from the number X we get $\dots\dots\dots$

($4X$ or $4 - X$ or $X - 4$ or $X + 4$)

d) Subtracting 3 from double of the number $X = \dots\dots\dots$

($X - 3$ or $2X - 3$ or $3X + 2$ or $5X$)

e) The difference of two numbers is 7 , the smaller is Y , then the greater number is $\dots\dots\dots$ ($7y$ or $7 - y$ or $y - 7$ or $y + 7$)

f) If the side length of an equilateral triangle is N and its perimeter is = $\dots\dots\dots$ ($\frac{1}{3}N$ or $N + 3$ or $3N$ or $N - 3$)

g) The side length of rhombus is X , its perimeter

=.....($4x$ or $X+4$ or $X-4$ or $X \div 4$)

h) If the sum of two numbers X and Y is 20 , then $Y =$

.....($20+X$, $20-X$, $X-20$, $\frac{X}{20}$)

Third: Essay questions:

[1] Solve each of the following equations:

① $3x + 8 = 29$

② $5x - 7 = 33$

③ $\frac{1}{3}x + 8 = 10$

④ $\frac{1}{7}x - 3 = 2$

⑤ $9 + y = 44$

⑥ $25 - x = 7$

⑦ $24x = 61 \times 24$

[2] Find the value of x in the following:

① $22 + x = 9 + 22$

② $7x = 117 \times 7$

③ $12 \times (17 \times x) = (12 \times 17) \times 32$

④ $3 \times 52 = (x \times 2) + (x \times 50)$

⑤ $(7 \times 9) + (x \times 5) = 7 \times 14$

⑥ $x \times 3 + x \times 60 = 4 \times 63$

⑦ $482 = x + (8 \times 10) + (4 \times 100)$

If the age of a man now is x years where $x \in \mathbb{N}$ Find:

(1) The age of the man after 7 years.

(2) The age of the man since 10 years.

Ahmed has LE x , Samir has LE **10** and the sum of what Samir has and the twice of what Ahmed has is LE **24**. Write an equation to represent this situation and find the value of x .

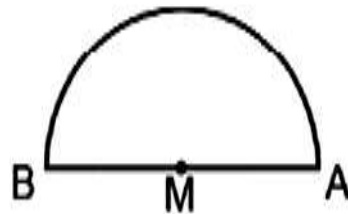
The greatest number of four consecutive natural numbers is $x + 7$, Find the other three numbers.

The greatest number of five consecutive natural odd numbers is $y + 15$. Find the other four numbers.

In the opposite figure

Calculate the perimeter of figure

Where $AM = 35$ cm. ($\pi = \frac{22}{7}$)



Using the properties of commutation and association in N to find the result of addition in each of the following (Write the used property)

① $872 + 199 + 128 + 801$

③ $28 + 59 + 72 =$

② $413 + 152 + 187 + 348$

Use the distributive property to get the product of each of the following:

① 18×99

② 56×1002

③ 98×54

④ 299×17

⑤ 304×25

⑥ $8 \times 137 \times 125$

If x is a prime number included between 5 and 9 write down the values of x , then represent the values of x^2 on the number line.

If x is a prime number included between 1 and 6 write down the values of x , then represent the values of $\frac{30}{x}$ on the number line.

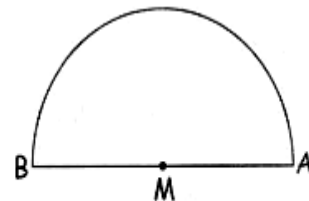
Five consecutive odd numbers, its middle number is $(x + 12)$ write down these numbers

If $x + 3$ is the smallest number of four consecutive even numbers. Write down these numbers.

The following table shows the marks of 35 students in maths exams. Graph these data using the frequency polygon.

Sets	5-	10-	15-	20-	25-	Total
Frequency	5	9	11	6	4	35

a) Find the perimeter of the given figure if $AB = 14$ cm ($\pi = \frac{22}{7}$)



b) Write the equation that represents:

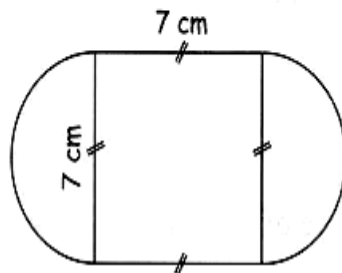
A number if added to 7 the result is 28.

c) On a coordinate plane: If A (2, 1) and B (2, 5), find the length of \overline{AB} .

a) Which is greater in area...?

The triangle whose base is 40 cm and its height is 16 cm or the parallelogram whose base is 20 cm and its height is 15 cm?

b) Calculate the perimeter of the following figure: ($\pi = \frac{22}{7}$)



a) If A (0, 4) and B (4, 4), find the midpoint of \overline{AB} .

b) Use the following table to draw a histogram.

No of hours	5-	7-	9-	11-
Frequency	4	12	9	5






Represent the following points:

A (1, 2), B (3, 5) and C (3, 2) and find its image by reflection about \overleftrightarrow{AC}

first Complete each of the following:

- 1) 3, 9, 27, (in the same pattern)
- 2) The circumference of a circle with radius 7 cm = ($\pi \simeq \frac{22}{7}$)
- 3) The area of the square whose diagonal length is 10 cm = cm²
- 4) If $2x = 6$, then $x =$ 5) $213 + 57 = 57 +$
- 6) The smallest natural number is
- 7) The rhombus with diagonals 6 cm and 8 cm, its area = cm²
- 8) Odd number + even number = number.
- 9) The area of the triangle = $\frac{1}{2} \times$ \times
- 10) Nada is n years now, her age after 3 years will be
- 11) If $x + 2 = 7$, then $x =$
- 12) The multiplicative identity element is
- 13) A circle of radius length 14 cm, its circumference = ($\pi \simeq \frac{22}{7}$)
- 14) (..... $\times 3$) $\times 28 = 10 \times (3 \times 28)$
- 15) The sum of any two odd numbers is an number.
- 16) 10, 30, 60, 100, 150, (in the same pattern)
- 17) If A (0,4), B (8,4) then the coordinates of the midpoint of \overline{AB} are (.....,.....)
- 18) The smallest counting number is
- 19) If $3x - 1 = 5$ then $x =$
- 20) If $n + 6 = 6$ then $n =$
- 21) The circumference of a circle with a diameter of 10 cm is cm ($\pi \simeq 3.14$)
- 22) If $x + 1 = 14$ then $x - 1 =$
- 23) If the lengths of diagonals of a rhombus are 8 cm and 5 cm, then its area = cm²
- 24) $43 + 59 = 59 +$
- 25) The smallest natural even number is
- 26) If $y - 3 = 10$, then $y =$
- 27) The area of the rectangle = \times
- 28) 10000, 1000, 100, (in the same pattern)
- 29) The length of the diagonal of a square is 20 cm, then its area = cm²
- 30) The area of the rhombus = length \times
- 31) 2, 8, 32, (in the same pattern)
- 32) $4 \times (2 + 5) = (4 \times 2) + (4 \times 5)$ is called property.
- 33) \mathbb{N} - counting numbers =

Second Choose the correct answer:

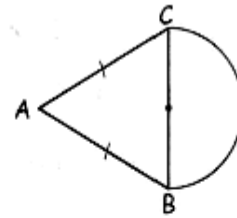
- 1) The even prime number is (0 , 1 , 2 or 3)
- 2) If $x + 4 = 7$, then $x =$ (0 , 1 , 2 or 3)
- 3) If the radius of a circle is 35 cm, then its circumference = (22 , 202 , 220 or 110)
- 4) If $m \div 3 = 99$, then $m =$ (33 , 96 , 102 or 297)
- 5) $(9.6 + 0.4)$ \mathbb{N} (\in , \notin , \subset or $\not\subset$)
- 6) $40 \div 4 = (24 \div 4) + (\text{.....} \div 4)$ (4 , 6 , 10 or 16)
- 7) $3 - 8 =$ in \mathbb{N} (11 , 5 , 24 or is not possible)
- 8) $(42 - 2) + \text{.....} = 42$ (2 , 0 , 40 or 42)
- 9) If $y \div 10 = 10$, then $y =$ (100 , 10 , 1 or 0)
- 10) The shaded triangle is an image of the other triangle by  
(translation , rotation or reflection)
- 11) The area of a triangle with base 4 cm and height 7 cm = (28 , 11 , 41 or 14)
- 12) The opposite transformation is   (reflection , translation or rotation)
- 13) $8 \times 54 =$
[[$(8 \times 5) + (8 \times 4)$, $(8 \times 50) + (8 \times 4)$, $(5 \times 8) + (40 \times 8)$ or $(8 \times 9) + 8 \times 6$]]
- 14) $6x = 60$ then $x =$ (0 , 5 , 10 or 6)
- 15) Mai is x years old, then Mai's age 3 years ago was ($3 - x$, $x + 3$, $x - 3$ or x)
- 16) If $A = (2,1)$ and $B = (2,3)$, then the coordinates of the midpoint of \overline{AB} are
((3 , 2) , (2 , 2) or (3 , 3))
- 17) The circumference of circle = ($2\pi r$, πr or $4\pi r$)
- 18) The first coordinate in (3,7) is (3 , 7 or 10)
- 19)  the geometric transformation is (translation or reflection or rotation)
- 20) The multiplicative identity element is (0 , 1 or 2)
- 21) Three times a number x in symbol is ($3x$, $x + 3$ or $\frac{x}{3}$)
- 22) 0 \mathbb{N} (\in , \notin , \subset or $\not\subset$)
- 23) $(9 \times 4) \times 3 = \text{.....} \times (4 \times 3)$ (2 , 3 , 9 or 11)
- 24) 5, 10, 15, 20, (35 , 25 , 45 or 55)
- 25) A square of side length 7 cm, then its area = (14 , 28 , 49 or 56)

In the opposite figure:

\overline{BC} is a diameter whose length is 7 cm, $AC = AB = 6$ cm.

Calculate the perimeter of the opposite figure.

$(\pi \approx \frac{22}{7})$



a) The circumference of a circle = 88 cm, find its radius length. $(\pi \approx \frac{22}{7})$

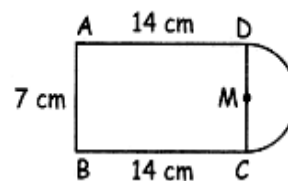
b) The area of the square whose diagonal length is 12 cm equals the area of the parallelogram whose base length is 9 cm, find the height of the parallelogram corresponding to this base.

a) Express in words the mathematical relation $a + b = 11$, then find the value of b when $a = 7$.

b) If the wheel's diameter length of a bicycle is 60 cm, what is the distance that the bicycle covers if the wheels turn 1500 rounds? $(\pi \approx 3.14)$

a) Find the perimeter of the opposite figure:

b) Solve the equation: $\frac{x}{2} - 10 = 5$ in \mathbb{N} .



$(\pi \approx \frac{22}{7})$

a) Use the properties of addition to find the value of: $75 + 16 + 25$.

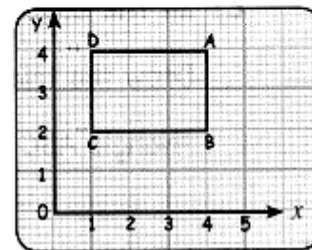
b) Which is greater in area? A triangle of height 6 cm and base length of 5 cm or the area of a rhombus whose diagonal lengths are 7 cm and 4 cm. Why?

a) Use the opposite figure to find:

1) The length of \overline{BC} .

2) The area of the shape ABCD.

b) If Ahmed and Basma have 14 books, if Ahmed has x books. How many books does Basma have?



a) Solve the following equation: $5x + 45 = 70$ (where $x \in \mathbb{N}$)

b) Represent the following distribution by frequency polygon:

Sets	0-	4-	8-	12-	16-
Frequency	6	10	12	5	3

c) Solve the following equation: $x + 3 = 12$ where $x \in \mathbb{N}$

d) On the coordinate plane draw the triangle ABC where A (2, 1), B (5, 1) and C (5, 5), then draw the image of the triangle ABC by reflection in \overleftrightarrow{BC} .

e) The area of a parallelogram = 48 cm^2 and its base = 8 cm. What is its height?

f) Find by using properties of operation: $125 \times 98 \times 8$.

(1)

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1. Choose the correct answer:

a) $\frac{1}{2} \times \frac{1}{4} = \frac{\dots}{8}$ (1 or 2 or 3 or 4)

b) $1 \text{ m}^2 = \dots \text{ cm}^2$. (10 or 100 or 1000 or 10000)

c) If we subtract 5 from the number x we get (5X or $5 - x$ or $x - 5$ or $x + 5$)

d) If the length of the base of a triangle is 8 cm and its corresponding height is 5 cm, then its area = cm^2 . (13 or 20 or 40 or 80)

e) $*(3 + 7) \dots \mathbb{N}$ (\in or \notin or \subset or ϕ)

2. Complete each of the following:

a) Area of a parallelogram = \times

b) The perimeter of a square whose side length x equals

c) If $16 - x = 9$, then $x =$

d) The number of axes of symmetry of an equilateral triangle =

e) $* 42 + (58 + \dots) = (42 + \dots) + 23$

3. a) Solve the equations: $2x + 9 = 21$, $x \in \mathbb{N}$

b) Which is greater in area?

A rhombus in which the lengths of its diagonals are 5 cm and 8 cm or a square in which the diagonal length equals 6 cm.

c) * Use the properties of multiplication operation in \mathbb{N} to calculate: $8 \times 43 \times 125$

4. a) If the circumference of a circle is 314 cm, then find the diameter length. ($\pi \approx 3.14$)

b) The following table shows the marks of 35 pupils in an exam.

Sets (marks)	10-	20-	30-	40-	Total
Number of pupils	8	12	5	35

1) complete the table.

2) Find the number of pupils whose marks are less than 30.

5. a) On the coordinates plane determine the points A (3, 5), B (6, 4) and C (3, 2), then draw the image of $\triangle ABC$ by reflection across \overleftrightarrow{AC} .

b) The following table shows the ages of 100 students in a school.

Sets	4-	8-	12-	16-	Total
Frequency	15	40	35	10	100

Draw the frequency polygon which represents these data.

(2)

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1. Choose the correct answer:

a) If: $x + 7 = 12$, $x \in \mathbb{N}$, then $x =$ (5 or 15 or 19 or 82)

b) The square whose diagonal length is 8 cm, its area = cm^2 . (8 or 16 or 32 or 64)

c) The circumference of the circle whose radius length is 14 cm = cm.

(14 or 22 or 44 or 88)

d) If: $75 = 5 + y \times 10$, then $y =$

(5 or 6 or 7 or 10)

e) * If x is an odd number, then $x + 3$ is a/an number.

(odd or even or prime or otherwise)

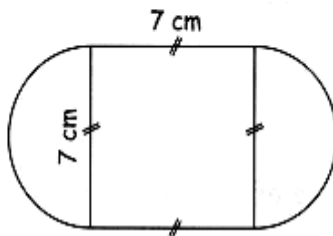
2. Complete each of the following:

- a) The value of $2x + 5$ when $x = 2$ is
- b) The area of the triangle =
- c) If the ordered pair $(2, 5) = (2, x)$, then $x = \dots\dots\dots$
- d) The lengths of the diagonals of rhombus are 12 cm and 16 cm, then its area = cm².
- e) * $20 \times (35 + \dots\dots\dots) = 20 \times 35 + 20 \times 65$

3. a) Which is greater in area...?

The triangle whose base is 40 cm and its height is 16 cm or the parallelogram whose base is 20 cm and its height is 15 cm?

- b) Calculate the perimeter of the following figure: ($\pi = \frac{22}{7}$)

**4. a) In the two dimensional coordinate plane:**

- 1) Draw the triangle XYZ where X (1, 1), Y (3, 1) and Z (3, 4).
- 2) Draw the image of the triangle XYZ by reflection across \overleftrightarrow{YZ} .
- 3) Complete: $X^{\wedge} (\dots\dots\dots , \dots\dots\dots)$, $Y^{\wedge} (\dots\dots\dots , \dots\dots\dots)$

b) Solve the following equations:

1) $20 + 2x = 26$

2) $10 - y = 6$

- c) * Using the properties of addition in \mathbb{N} , find the result: $42 + 73 + 58 + 27$

5. The following table shows the frequency distribution of the number of work hours of some workers.

Represent these data by using frequency polygon:

Sets	4-	6-	8-	10-
Frequency	10	12	9	14

