1 Cairo - El Salam Educational Zone - Gohar Language School

1 Choose the correct answer:

a A parallelogram with two adjacent sides of lengths 5 cm and 7 cm, the length of the smaller height = 4 cm, then its area = ... cm^2. (20 **or** 10 **or** 28 **or** 14)

b $\frac{25-22}{4-4}$ = ... (zero **or** 3 **or** 4 **or** meaningless)

c The number of axes of symmetry of the rhombus = ... (zero **or** 1 **or** 2 **or** 4)

d The least prime number × any prime number = ... number.

(odd **or** even **or** prime **or** otherwise)

---

2 Complete:

a A square, its diagonal length is 8 cm, then its area is ..... cm^2.

b The perimeter of a rectangle is 16 cm, its width is x cm, then its length = ... cm.

c If $x + 4 = 15$, $x \in \mathbb{N}$, then x = ...

d If we add 3 to twice the number x, then we will get the number ..... .

---

3 a **Using the properties of commutation and association in $\mathbb{N}$ find:**

1) $25 \times 18 \times 4$ 2) $44 + 67 + 56 + 33$

b **Solve the following equation in $\mathbb{N}$:** $4x + 5 = 17$.

---

4 a In the orthogonal Cartesian co-ordinates plane locate the points A (5, 9), B (9, 7), C (5, 5), D (1, 7), E (9, 5).

b **Draw** the line segments $\overline{AB}$, $\overline{AD}$, $\overline{CD}$ and $\overline{BC}$.

c If $\overleftrightarrow{CE}$ is the axis of reflection of the figure ABCD, then **determine its image.**

d **What is the name of the figure ABCD?**

e **Calculate the area of the figure ABCD.**

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

b **Use the following table of data to draw a histogram:**

Sets	0 –	4 –	8 –	12 –
Frequency	4	12	3	7

2 Cairo - El-Waily Educational Directorate - El Salam Language School

1 Complete:

a The area of rhombus = $\frac{1}{2}$ × ..... × ..... .

b (..... × 3) × 7 = (8 × 3) × ..... .

c 3, 9, 27, 81, ..., ... (in the same pattern)

d The set of natural numbers less than or equal to 4 is ..... .

e Twice the number y is added to 5, then it is represented by ..... .

---

2 Choose the correct answer:

a $5\frac{1}{2}$ ..... $\mathbb{N}$. ($\in$ **or** $\notin$ **or** $\subset$ **or** $\not\subset$)

b The square has ..... line(s) of symmetry. (1 **or** 2 **or** 3 **or** 4)

c $31 + x = 6 + 31$, then x = ... (6 **or** 31 **or** 37 **or** 25)

d The additive identity element in $\mathbb{N}$ is ..... . (0 **or** 1 **or** 2 **or** 3)

e The area of a triangle with base 8 cm and height 7 cm is ..... cm^2. (56 **or** 28**or** 15 **or** 112)

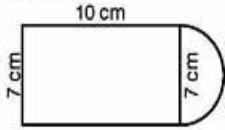
---

3 a **Use the commutative and associative properties to find the value of:**

1) $4 \times 23 \times 25$ 2) $346 + 273 + 154 + 727$

b The opposite figure is made up of half circle and a rectangle.

Find the perimeter of the figure. ($\pi \simeq \frac{22}{7}$)



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4 a In the coordinate plane of two perpendicular axes draw the position of the points A = (1, 1), B = (5, 1), C = (5, 4), then **draw its image by reflection in $\overline{BC}$ then find the area of the whole figure.**

b **Which is greater in area:** A parallelogram with base 8 cm and height 6 cm or a square of diagonal length 10 cm?

5 a **Solve the equation:** $3x + 1 = 13$.

b **The following table shows the degrees of some pupils in an exam.**

Marks	0 –	5 –	10 –	15 –	20 –
Frequency	6	9	13	10	8

Draw these data by using histogram.

3 Giza - Educational Directorate - Experimental Language School

1 Complete:

a The multiplicative neutral element in $\mathbb{N}$ is ..... .

b The side length of a square is 10 cm, then its area is ..... .

c If $x + 8 = 15$, $x \in \mathbb{N}$, then x = ...

d The circle whose diameter length is 14 cm, its circumference = ... cm.

e 74 x (73 + 27) = 74 x ..... = ...

f (49 ÷ 8) ..... $\mathbb{N}$.

---

2 Choose the correct answer:

a The set of even numbers ..... the set of natural numbers. ($\in$ or $\notin$ or $\subset$ or $\not\subset$)

b If x is an odd number, then $x + 3$ is ..... number. (odd or even or prime)

c The number of axes of symmetry of the rhombus equals ..... .

(zero or 1 or 2 or 4)

d The symbolic expression for twice the number y subtracted from it 4 is ..... .

(y–4 or 2y–4 or y+4 or 2y + 4)

e 1, 4, 8, 13, ... (18 or 17 or 15 or 19)

f The area of the rhombus is ..... . ($\frac{1}{2}$ x d1 × d2 or b – x h – $\frac{1}{2}$ × b or xh)

---

3 Which is greater in area? A triangle of base length 12 cm and its height = 8 cm or a parallelogram of base length = 10 cm and its height = 5 cm.

4 Use properties of addition and multiplication:

a 8 × 137 × 125 = ...

b 28 + 59 + 72 = ...

---

5 Draw the frequency histogram and the frequency polygon which represents these data:

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	9	7	40

4 Giza - Al-Haram Directorate - Al-Mostakbal Modern Language School

1 Choose the correct answer:

a If $x + 7 = 19$, $x \in \mathbb{N}$, then x =..... . (26 or 12 or 13 or 11)

b The area of a square with diagonal length 6 cm is ..... .

(18 cm^2 or 36 cm^2 or 12 cm^2 or 6 cm^2)

c If X = $\{x : x \in \mathbb{N}, 3 < x < 4\}$, then $x \in$ ..... . ($\varnothing$ or {3 , 4} or {3} or {4})

d The area of a triangle with base length 5 cm and corresponding height 6 cm is ..... cm^2.

(30 or 15 or 25 or 36)

---

2 Complete:

a The circumference of a circle = ...

b Subtract 3 from twice the number x = ...

c The length of the diagonal of a square with area 50 cm^2 = ...

d The area of a parallelogram whose base length is 8 cm, and its height is 2.5 cm is ..... cm^2.

---

3 a Draw Δ ABC where A (2 , 5), B (5 , 5) and C (5 , 8), then **find its area.**

b If X = $\{x : x \in \mathbb{N}, 3 \leqslant x \leqslant 8\}$.

Use the listing method to write X, then **represent its elements on a number line.**

4 a **Use the commutative and associative properties in $\mathbb{N}$ to calculate:**

872 + 199 + 128 + 801.

b The following is a frequency distribution for the working hours of 50 workers, complete the table, then **graph these data by using the frequency polygon.**

Sets	2 –	4 –	6 –	8 –	10 –	Total
Frequency	8	9	x	16	2	50

5 Giza - Educational Directorate - Al Marefaa. Exp. Lang. School

1 Choose the correct answer:

a The number of axes of symmetry of a square = ... (1 or 2 or 3 or 4)

b If X = $\{x : x \in \mathbb{N}, 3 \leqslant x < 5\}$, then x = ... ({4} or {3} or {3, 4} or {4, 5})

c The circumference of a circle with diameter length 14 cm is ..... cm. where ($\pi \simeq \frac{22}{7}$)
(48 or 44 or 168 or 132)

d $\mathbb{O}$ ..... $\mathbb{C}$. ($\in$ or $\not\subset$ or $\subset$ or $\notin$)

2 Complete:

a The smallest natural number is ..... .

b If $2x = 10$, then x = ...

c If A (4, 5) and C (4, 12), then the length of $\overline{AC}$ = ... length unit.

d The type of the opposite geometric transformation is ..... .

3 a **Solve the equation:** $2x + 3 = 5$ where $x \in \mathbb{N}$.

b A rhombus of side length = 6 cm, and its height is 5 cm, **find its area.**

4 a **Use the properties to find the value of:**

1) 48 + 37 + 52 + 63 2) 8 × 19 × 125

b Find the area of the Δ whose base length is 6 cm, and its corresponding height is 4 cm.

5 Represent the following distribution by frequency polygon:

Sets	0 –	8 –	8 –	12 –	16 –
Frequency	6	10	12	5	3

6 Alexandria - Agamy Educationl Zone - Maths Supervision

1 Complete:

a If $3x = 15$, $x \in \mathbb{N}$, then x = ...

b 1, 4, 9, 16, ... , ...

c The area of a square whose diagonal length is 6 cm =..... cm^2.

d The circumference of the circle whose diameter is 14 cm = ... ($\pi \simeq \frac{22}{7}$)

e The multiplicative neutral element in $\mathbb{N}$ is ..... .

2 Choose the correct answer:

a (7 + 19) ..... $\mathbb{N}$. ($\subset$ or $\in$ or $\notin$ or $\not\subset$)

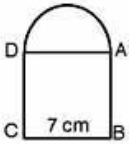
b The area of a rhombus whose diagonals are 6 cm and 8 cm is ..... .
(120 or 60 or 24 or 32)

c In case of subtracting 6 from third of the number y its symbolic expression is ..... .
(y–5 or 2y – 5 or y + 5 or $\frac{1}{3}$ y – 6)

d If $x + 1 = 10$, $x \in \mathbb{N}$, then x = ... (3 or 7 or 9 or 5)

e If X = $\{x : x \in \mathbb{N}, 5 \leqslant x < 6\}$, then x = ... ({4} or {5} or {3, 4} or {4, 5})

3 a **Calculate the perimeter of the opposite figure:**



If ABCD is a square, whose side length is 7 cm.

b **In two-dimension coordinates plane:**

1) Locate the points A (3, 1) , B (3, 5), C (5, 5), D (5, 1), **then find the area of the shape.**

2) Determine the image of the figure, if $\overline{CD}$ is the axis of reflection of the figure ABCD.

4 a **Solve the equation:**

$5x - 6 = 24$, $x \in \mathbb{N}$

b Using the properties of addition and multiplication, **find:**

1) 36 + 59 + 64 2) 36 × 82 + 36 × 18

5 The following table shows the marks of 35 pupils in an exam, where the full mark is 50.

Draw the histogram, which represents these data.

Sets	10 –	20 –	30 –	40 –	Total
Frequency	8	12	10	5	35

7 Alexandria - El-Montazah Educational Zone - Maths Supervision

1 Complete:

a) $9 \times$ ..... $= 6 \times$ ..... = ...

b) If $a \in \mathbb{N}$, and $b \in \mathbb{N}$, then $a \times b$ ..... $\mathbb{N}$.

c) If $x \in \mathbb{N}$, $5x - 3 = 17$, then $x =$ ..... .

d) The area of a square whose side length is 6 cm = ... cm^2.

---

2 Choose the correct answer:

a) 5.7 ..... $\mathbb{N}$. ($\in$ or $\notin$ or $\subset$ or $\not\subset$)

b) $(8 \times 3) \times 5 =$ ..... $\times (3 \times 5)$. (3 or 5 or 8 , or 9)

c) If the diameter of a circle is 14 cm, then its circumference = ... cm. ($\pi \simeq \frac{22}{7}$)

(11 or 22 or 44 or 66)

d) The sum of two numbers is 8, one of them is x then the other is ..... .

($x - 8$ or $\frac{1}{8}x$ or $8x$ or $8 - x$)

---

3 a) Use the distributive property of multiplication over addition and subtraction to **complete:**

$60 \times 8 + 60 \times 7 = 60$ (..... + ...) $= 60 \times$ ..... = ...

b) The lengths of the diagonals of a rhombus are 24 cm and 30 cm. **Calculate its area.**

---

4 a) In the coordinate plane, **draw the figure ABCD where A (3, 1), B (3, 5), C (7, 5) and D (7, 1) what is the name of the figure ABCD?**

b) **Solve the equation:**

1) $4x - 5 = 19$ for the replacement sets {5, 6, 7}

5 Use the following table of data to draw the frequency polygons:

Sets	10 –	20 –	30 –	40 –	50 –
Frequency	6	10	12	8	6

8 Qalubia - Educational Directorate - Maths Supervision

1 Choose the correct answer:

a) $(3 + 9)$ ..... $\mathbb{N}$. ($\subset$ or $\not\subset$ or $\in$ or $\notin$)

b) If $x - 2 = 5$, then $x =$ ..... . (5 or 2 or 10 or 7)

c) The area of the square whose diagonal length is 10 cm = ... cm^2.

(100 or 50 or 60 or 80)

d) The multiplicative identity in $\mathbb{N}$ is ..... . (1 or 0 or 2 or 3)

e) The number of axes of symmetry of the rectangle = ...

(zero or 4 or 2 or 6)

---

2 Complete:

a) $32 + (59 +$ .....$) = (32 +$ .....$) + 68$.

b) 1, 4, 8, 13, ... (in the same pattern)

c) If $5x = 20$, then $x =$ ..... .

d) The area of the triangle whose base length is 5 cm and the corresponding height of it is 4 cm = ... cm^2.

e) If $(x, 5) = (3, y)$, then $x =$ ..... , $y =$ ..... .

---

3 a) **Use the properties of addition to find the value of:** $34 + 57 + 66 + 43$.

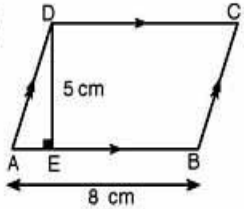
b) **Use the distributive property to find the value of:** $27 \times 48 + 27 \times 52$.

---

4 a) **Find the solution set of the equation:** $2x + 3 = 23$, $x \in \mathbb{N}$.

b) **In the opposite figure:**

Find the area of a parallelogram in which AB = 8 cm, DE = 5 cm, $\overline{DE} \perp \overline{AB}$



5 Use the following table of data to make a histogram:

Sets	10 –	20 –	30 –	40 –
Frequency	4	11	6	9

9 Kafr El-Sheikh - Educational Directorate - Maths Supervision

1 Choose the correct answer:

a (3 – 9) ..... ℕ . (⊂ or ∈ or ⊄ or ∉)

b If X = {x : x ∈ N, 3 < x < 4}, then x ∈ ..... . (∅ or {3, 4} or {3} or {4})

c (4 × .....) × 78 = 7800. (5 or 25 or 50 or 125)

d The radius of the circle whose circumference is 88 cm = ... cm.
(7 or 14 or 28 or 56)

e $\frac{12-6}{6-6}$ ..... ℕ. (⊂ or ∈ or ⊄ or ∉)

f The type of the transformation is ..... . (rotation or translation or reflection)

2 Complete:

a The multiplication neutral element in ℕ is ..... .

b If we add 3 to twice the number x, then we will get the number ..... .

c If 3 x + 7 = 19, x ∈ ℕ, then x = ...

d 1, 4, 8,13 ..... (in the same pattern).

e The square whose area is 72 cm², the length of its diagonal = ... cm.

f The sum of two numbers is 21, one of them is x, then the other is ..... .

3 a Use the properties of operation in ℕ to calculate:

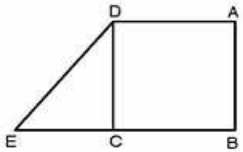
1) 872 + 199 + 128 + 801

2) 8 × 49 × 125

b **Which is greater in area:** A square whose diagonal is 10 cm or a right-angled triangle in which the lengths of the sides of the right angle are 8 cm and 15 cm?

4 a ABCD is a square. Its perimeter is 60 cm, E ∈ $\overrightarrow{BC}$, BE = 35 cm. **Find the area of the figure ABED.**

b **Solve the following equation:** $\frac{1}{3}x + 8 = 10$



c **In the opposite figure:**
The length of the diameter $\overline{AB}$ of a semicircle is 14 cm.
Find the perimeter of the figure. ($\pi \simeq \frac{22}{7}$)

5 a On the coordinate plane:
Plot the following points A (3, 5), B (6, 5) and C (3, 2). **Then draw the image of △ ABC by reflection across** $\overleftrightarrow{AB}$.

b The following table shows the frequency distribution of the number of work hours of 50 workers.

Sets	4 –	6 –	8 –	10 –	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represents these data.

10 Sharkia - Educational Directorate - Mathematics Supervision for E.L.S

1 Complete:

a The area of a parallelogram of base 5 cm and its height 4 cm is ..... cm².

b 0 ÷ 5 = ...

c 1, 4, 7, 10, ... , ... (In the same pattern)

d If y = 4, then 3y = ...

2 Choose the correct answer:

a (x + 12) ..... (x + 15), where x ∈ ℕ. (< or > or = or ⩾)

b The opposite geometric transformation is ..... .

(reflection or translation or rotation)

c The area of a square whose diagonal length is 10 cm = ...
(100 cm or 100 cm² or 50 cm or 50 cm²)

d (4 × .....) × 78 = 7800 (10 or 100 or 400 or 25)

3 a In the two-dimension coordinate plane locate the points A (2, 1), B (5, 1), C (5, 4) and D (2, 4). **Draw the figure ABCD and name it.**

b **Find:** The mid-point of $\overline{AB}$ if A (0, 4) and B (8, 4).

c **Find:** The length of height of the triangle whose area is 50 cm² and length of its base is 20 cm.

4 a Calculate the circumference of the circle whose diameter length is 14 cm. ($\pi \simeq \frac{22}{7}$)

b **By using the properties in ℕ,** find the result of the following:

1) 79 + 36 + 21 + 64 2) 4 × 17 × 25

5 a Solve the equation: x + 3 = 8, x ∈ ℕ.

b **Represent the following table by frequency polygon:**

Sets	10 –	20 –	30 –	40 –	50 –
Frequency	8	10	11	9	6

11 Port Said - North Educational Directorate - El-Asfory Islamic Schools

1 Choose the correct answer:

a The number of symmetry axes of a rhombus = ... (zero or 1 or 2 or 4)

b If $\mathbb{O}$ is the set of the odd number, then $\mathbb{O}$ ..... $\mathbb{N}$. ($\in$ or $\notin$ or $\subset$ or $\not\subset$)

c If 3y = 15 and y $\in \mathbb{N}$, then y = ... (5 or 12 or 18 or 45)

d The square its side length is x, then its perimeter = ...

($x + 4$ **or** $4 - x$ **or** $4x$ **or** $x - 4$)

---

2 Complete:

a The multiplicative neutral element in $\mathbb{N}$ is ..... .

b The area of square = $\frac{1}{2}$ x ..... x ..... .

c 15 x 7 = 7 x 15, then the name of property is ..... .

d A circle its radius is 5 cm, then its circumference = ... π cm.

---

3 a Adding 5 to number x produces 12 its symbolic expression is ..... . **Find the value of x.**

b A parallelogram its base = 4 cm and its height **= 5 cm. Find its area.**

---

4 a **Calculate by using commutative and distributive properties:**

1) 28 + 59 + 72 **2)** 25 x 897 x 4

b **Which area is greater:** A rhombus whose diagonal lengths are 6 cm, 8 cm or a square whose diagonal length is 8 cm?

---

5 a In the coordinate plane: plot the following points A (1, 6), B (1, 2), C (3, 6), D (3, 2), then **find the name of the figure ABCD and its area.**

b **The following frequency table shows the marks of 35 students in maths exam, graph the data using the frequency polygon:**

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

12 Ismailia - Educational Directorate - Maths Supervision

1 Complete:

a If $x - 2 = 4$, then x = ...

b 6 x ..... = ... x 6 = 6 is ..... property.

c If y = 3, then the value of 2y – 1 = ...

d 25 x 70 + 25 x ..... = 25 x 100

---

2 Choose the correct answer:

a Rhombus has ..... lines of symmetry. **(1 or 2 or 3 or 4)**

b A square, the length of its diagonal is 10 cm, then its area is ..... cm^2.

(10 or 50 or 100 or 200)

c The type of the opposite transformation ◁ ▷ is ..... . (flip or slide or turn)

d 8 subtracted from twice a number x = ... ($8 - x$ **or** $x - 8$ **or** $8 - 2x$ **or** $2x - 8$)

---

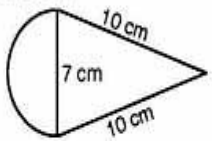
3 a In the coordinate plane draw the triangle ABC where A (1, 1), B (3, 1), C (3, 5), **then draw its image by reflection in BC.**

b **Find the solution set and represent on a number line** $x = \{x : x \in \mathbb{N}, 3 \leqslant x < 8\}$.

---

4 a A triangle its base length is 12 cm and its height is 8 cm. **Find its area.**

b **Find the perimeter of the figure** ($\pi \simeq \frac{22}{7}$)



---

5 a **Solve the equation:** 3 y = 6, where y $\in \mathbb{N}$

b The following table shows the temperatures of some cities on a day.

Sets	10 –	20 –	30 –	40 –
Frequency	20	30	20	40

1) Draw a frequency polygon for these data.

2) Find the number of cities with temperatures less than 30.

13 South Sinai - Educational Directorate - Maths Supervision

1 Choose the correct answer:

a) $2 + 9$ ..... $\mathbb{N}$ ($\subset$ or $\in$ or $\not\subset$ or $\notin$)

b) Twice the number x subtracted 3 from it ..... ($x - 3$ or $2x + 3$ or $2x - 3$ or $3 - 2x$)

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

d) The perimeter of a square whose side length is L = ... (2L or 4L or 3L or 5L)

2 Complete:

a) The area of a parallelogram = ...

b) If $x + 3 = 12$, then x = ...

c) The next number in the pattern 5, 35, 65, ...

d) 99 added to the neutral element of multiplication = ...

3 a) **Calculate the area of the triangle whose base length is 10 cm and the corresponding height of it is 9 cm.**

b) **Put <, = or >:**

1) $x + 18$ ..... $x + 17$ 2) 2239 2229

4 a) **Put (✓) for the correct statement and (✗) for the wrong one:**

1) $(5 - 8) \in \mathbb{N}$ ( )

2) The additive neutral element of adding in $\mathbb{N}$ is one. ( )

3) The value of x in the equation $3x = 24$ is 8. ( )

b) **Find the circumference of a circle with diameter length 14 cm.**

5 The following table shows the marks of 40 pupils in mathematics exam.

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	9	7	40

Draw the frequency histogram and the frequency polygon which represent these data.

14 Beni Suef - Educational Directorate - Al-Shorouk E . L . S

1 Complete:

a) The smallest natural number is ..... .

b) 3, 9, 27, ... , ... (Complete in the same pattern)

c) The number of axes of symmetry of the square = ...

d) If $15 - x = 9$, then x = ...

2 Choose the correct answer:

a) Double the number x subtracted 7 from it = ... ($x - 7$ or $2x - 7$ or $7x + 2$ or $14x$)

b) The area of a rhombus whose diagonal lengths are (4 cm) and (10 cm) is = ... cm^2.

(40 or 80 or 20 or 10)

c) The circumference of a circle = ... ($2\pi d$ or πr or $4\pi r$ or $2\pi r$)

d) {2, 3, 0, 4} ..... $\mathbb{N}$. ($\subset$ or $\in$ or $\not\subset$ or $\notin$)

3 a) The length of the base of a triangle is 6 cm and its height is 4 cm. **Find the area of this triangle.**

b) In the orthogonal Cartesian coordinates **locate the points: A (3, 5), B (6, 5) and C (3, 2), then find length $\overline{AC}$.**

4 a) By using the properties of operation in $\mathbb{N}$, **find the result of the following:**

$4 \times 49 \times 25$ = ...

b) **Solve the equation:** $3x + 8 = 29$

5 a) **Find the area of the parallelogram whose base length is 10 cm and height length is 3 cm.**

b) **Use the following table of data to make the histogram:**

Sets	5 –	7 –	9 –	11 –
Frequency	4	12	9	8

15 Minia - Educational Directorate - Maths Supervision

1 Complete:

a If $x + 8 = 15$, $x \in \mathbb{N}$, then x = ...

b The square whose area is 72 cm², the length of its diagonal = ...

c The diameter length of circle whose circumference equals 88 = ... cm.

d 32 + (59 + ...) = (32 + 68) + ...

2 Choose the correct answer:

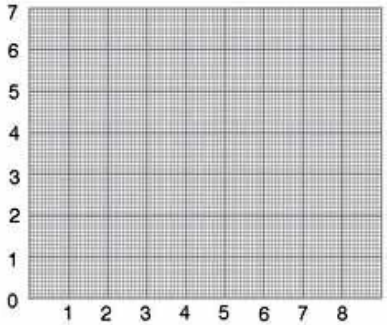
a The number of axes of symmetry of the rhombus equals ..... . (zero **or** 1 **or** 2 **or** 4)

b (3 + 9) ..... $\mathbb{N}$. ($\subset$ **or** $\in$ **or** $\not\subset$ **or** $\notin$)

c The triangle whose base length is 5 cm, and the corresponding height of it is 6 cm, its area = ... cm². (30 **or** 15 **or** 25 **or** 36)

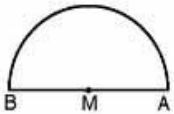
d Twice a number subtracted 3 from it = ... ($x - 3$ **or** $2x + 3$ **or** $2x - 3$ **or** $3 - 2x$)

3 In the coordinate plane draw the triangle ABC where A (1, 2), B (3, 2) and C (3, 4), then **draw the image of the triangle ABC by reflection on** $\overleftrightarrow{BC}$.



4 a **Solve the equation:** $2x + 5 = 9$, where $x \in \mathbb{N}$.

b **Calculate the perimeter of the opposite figure** AM = 7 cm. ($\pi \simeq \frac{22}{7}$).



5 The following table shows the frequency distribution of the number of work hours of 50 workers.

Sets	4 –	6 –	8 –	10 –	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represents these data.

16 Assuit - Educational Directorate - Maths Supervision

1 Complete:

a The area of a square = $\frac{1}{2}$ × ..... × .....

b For a $\in \mathbb{N}$, b $\in \mathbb{N}$, then a × b ..... $\mathbb{N}$.

c If $x + 7 = 19$, $x \in \mathbb{N}$, then x = ...

d If X = {$x : x \in \mathbb{N}$, $1 \leqslant x < 5$, then X = {..... , ... , ... , ...}

2 Choose the correct answer:

a 6 + 15 ÷ 3 × 5 – 30 = ... (5 **or** 25 **or** 1 **or** 15)

b The area of the rhombus whose diagonals are 10 cm and 20 cm is = ... cm². (200 **or** 30 **or** 100 **or** 40)

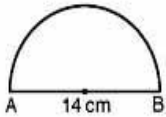
c If the set of even numbers is $\mathbb{E}$, then $\mathbb{E}$ ..... $\mathbb{N}$. ($\in$ **or** $\notin$ **or** $\not\subset$ **or** $\subset$)

d If $3x = 15$, $x \in \mathbb{N}$, then x =..... . (5 **or** 12 **or** $\frac{1}{5}$ **or** $\frac{1}{3}$)

3 a **In the opposite figure:**

The length of the diameter $\overline{AB}$ of a semicircle is 14 cm.

Find the perimeter of the figure ($\pi \simeq \frac{22}{7}$).



b **Use operations properties to calculate:** 973 + 299 + 227 + 901

4 a In a two-dimension 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 across** $\overleftrightarrow{BC}$.

b **Which is greater in area:** A rhombus whose diagonals are 6 cm and 8 cm or a square whose diagonal is 8 cm²?

5 The following frequency table shows the marks of 35 students in the maths exam, graph **these data using the frequency polygon.**

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

17 Sohag - Educational Directorate - Maths Supervision

1 Choose the correct answer:

a The sum of two natural numbers ..... $\mathbb{N}$. **($\in$ or $\notin$ or $\subset$ or $\not\subset$)**

b The area of a rhombus whose diagonal lengths are 6 cm and 8 cm is ..... cm^2. **(48 or 20 or 24 or 40)**

c If the longest chord in a circle is 7 cm, then the circumference of the circle is ..... cm where ($\pi \simeq \frac{22}{7}$). **(3.5 or 7 or 22 or 44)**

d If $x + 7 = 19$, $x \in \mathbb{N}$, then $x =$ ..... . **(26 or 12 or 11 or 13)**

2 Complete:

a The least natural number is ..... .

b The additive natural element in ($\mathbb{N}$) is ..... while the multiplicative natural element in ($\mathbb{N}$) is ..... .

c The area of the triangle = $\frac{1}{2}$ the length of its base x ..... .

d The number of axes of symmetry of the rhombus equals ..... .

3 a **Draw the rectangle ABCD where AB = 2 cm, BC = 3 cm and find its image by reflection on $\overleftrightarrow{CD}$.**

b **Use the commutative and associative properties in $\mathbb{N}$ to calculate:**

872 + 199 + 128 + 801

4 a Zahraa saved 14 pounds, she bought 3 notebooks for x pound for each and the remainder with her was 8 pounds, **express these situations by an equation.**

b **Find to the nearest hundredth the area of a parallelogram whose base length is 34.7 cm and height is 28.17 cm.**

c If the diagonal length of a square is 6 cm, **find its area.**

5 a In the orthogonal Cartesian coordinates locate the points (A (2, 2), B (5, 2), C (5, 8), D (2, 8), **then complete:**

1) The length of $\overline{AB}$ = ... units. **2)** The length of $\overline{BC}$ = ... units.

3) The figure ABCD is ..... . **4)** The perimeter of the figure ABCD = ... units.

b The following table shows the marks of 50 pupils in the exam of mathematics in one of months where the full mark is 50 marks.

Draw the frequency histogram and the frequency polygon which represents these data.

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

18 Aswan - Educational Directorate - Maths Supervision

1 Choose the correct answer:

a $\frac{5}{7}$ ..... $\mathbb{N}$ **($\in$ or $\notin$ or $\subset$ or $\not\subset$)**

b $10 \times 0 =$ ..... . **(100 , 10 , 0 , not possible)**

c If $2x = 6$, then $x =$ ..... . **(2 or 3 or 4 or 6)**

d The circumference of the circle whose radius is 14 cm equals ..... cm ($\pi \simeq \frac{22}{7}$).

2 Complete:

a If: A (0, 4) and B (4, 4), then the coordinates of the midpoint of $\overline{AB}$ is ..... .

b The multiplicative identity element in $\mathbb{N}$ is .....

c $(9 \times 4) \times 3 =$ ..... $\times (3 \times 4)$

d The area of the triangle = $\frac{1}{2} \times$ ..... $\times$ ..... .

3 a **Use the properties of addition to find the result of the following: 82 + 75 + 18**

b The lengths of the diagonals of a rhombus are 14 cm and 10 cm. **Calculate its area.**

4 a **On a coordinate plane:**

Draw the figure ABCD where A (1, 1), B (4, 1), C (4, 3), D (1, 3). What is the name of the figure ABCD?

b **Find the height of the parallelogram with an area of 48 cm^2 and its base is 8 cm long.**

5 a **Solve the equation:** $2x + 3 = 9$

b **Use the following table of data to draw a histogram:**

Number of hours	5 –	7 –	9 –	11 –
Frequency	4	12	9	5