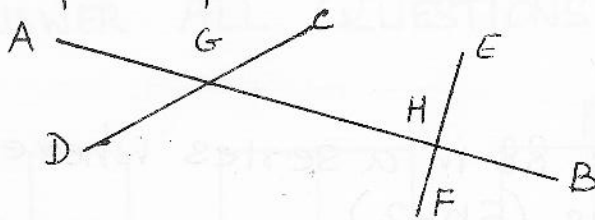


PART I

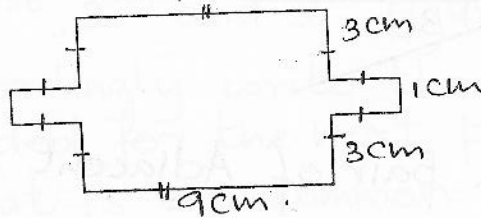
• ANSWER ALL QUESTIONS

1. 4, 7, 10, 13, Give the next two terms in this sequence.
2. 1, 3, 6, 10, By what name is this number sequence known.
3. Name a pair of Alternate angles and a pair of Corresponding angles.



4. Find the value using a number line $(-5) - (+3)$

5. Find the perimeter of this figure



6. Simplify $5(3x+5)+2x$

7. Rewrite separating common factors.
 $4x-16$

8. What are Platonic Solids?

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9. Find the number of vertices in a straight edged solid with 12 faces and 20 edges

10. Find the factors $5x^2 - 15$

11. Calculate the length of a side of a square whose area is 121 cm^2 .

12. Find the 13th term in a series where the General Term is $4n - 3$

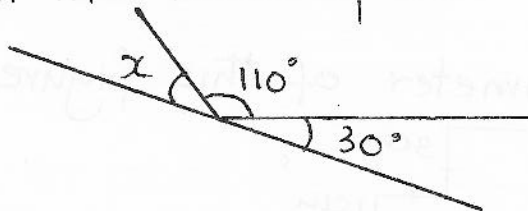
13. Find the value $\sqrt{3^2 \times 5^2}$

14. Find the value

$$\frac{(-20)}{(+4)} - \frac{(+28)}{(-4)}$$

15. Which term is 88 in a series where the General Term is $(5n - 2)$

16. Find the value of x

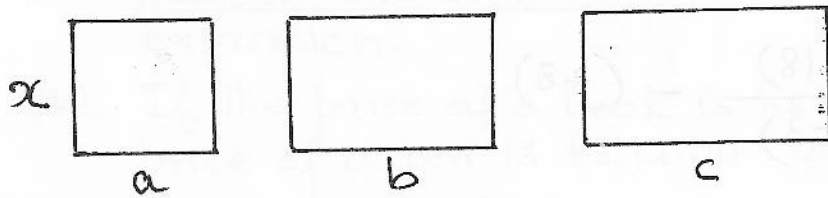


17. Explain what a pair of Adjacent Angles is?

18. 60 Books and 40 pens have to be packed so that an equal number of books and an equal number of pens are in each parcel. What is the heighest number of parcels that can be made? How many books and pens will there be in each parcel?

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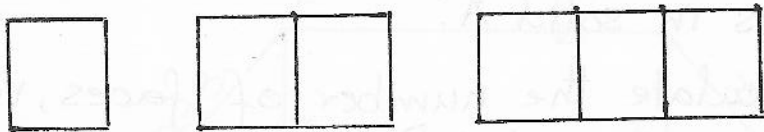
19. Write down the number of faces, edges and vertices in a Dodecahedron.
20. The figure shows 3 rectangles of equal breadth. If they are fixed together to form one rectangle (without changing its breadth), give its perimeter as an algebraic expression with brackets.



PART II

- ANSWER ALL QUESTIONS

1.



Given above are 3 separate figures made using match sticks.

1. Write down the number of match sticks used for 1st, 2nd and 3rd figure respectively.
- ii. Accordingly write the number of match sticks needed for the next pattern.
- iii. What is the common difference in this sequence
- iv. Accordingly find the General Term of this sequence
- v. Using the G.T. calculate the number of matchsticks required for the 15th pattern in this sequence.
- vi. Using 61 match sticks which pattern can be made.

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2. a. Using a number line find the value of $(+3) - (-3)$

b. Find the value of the following.

(i). $(+9) - (-8)$

(ii). $(-4) - (-9) + (-5)$

(iii). $(+9) + (+6) \times (-5)$

(iv) $\frac{(-18)}{(+3)} - (+8)$

3. Given below are two solids having square bases of equal size.

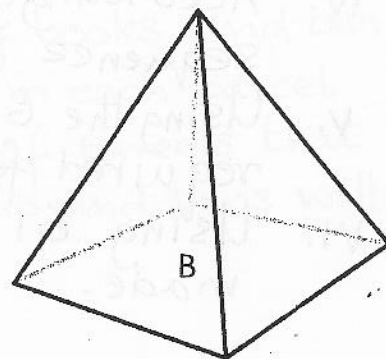
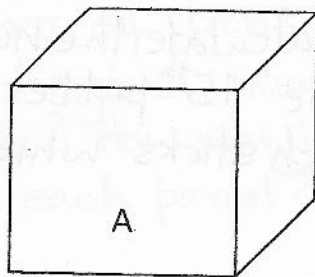
(i). Name the solids A and B.

(ii). Calculate the number of faces, vertices and edges in solid A.

(iii). Calculate the number of faces, vertices and edges in solid B.

(iv). If solid B is placed on solid A so that their square faces coincide and form a composite solid, how many faces, edges and vertices are there in this composite figure.

(v). Will the new composite solid satisfy Euler's equation.



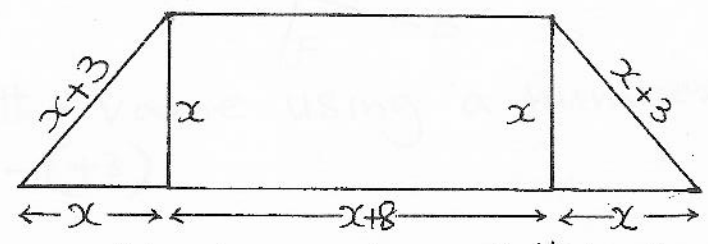
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4. a). The price of a pen is Rs. x and the price of a book is Rs. y . A gift pack is to be made with 3 books and 2 pens.

- (i). Write down the price of this parcel as an algebraic expression.
- (ii). Write down an algebraic expression with brackets for 5 such gift packs.
- (iii). Remove the brackets of the above algebraic expression.
- (iv). If the price of a book is Rs. 35.00 and the price of a pen is Rs. 12.00 calculate the cost for 5 gift packs.

b). Remove the brackets and simplify $3x + 6(2x - 6) + 3x$.

5. a).



- i). Express the perimeter of this figure as an algebraic expression.
- ii). If the perimeter of this figure is 64 cm. Calculate the value of x .

b). AB and CD are straight lines. Calculate the value of x and y .

