Dr. M.K.K. ARYA MODEL SCHOOL, PANIPAT

MATHS ASSIGNMENT

CLASS - VII

CH - 11 (Perimeter and Area)

1. Find the perimeter of a square whose area is $196cm^2$.
2. The area of a rhombus is $42m^2$. If its perimeter is 24m, find its altitude.
3. The ratio of two adjacent sides of a parallelogram is 2:3. Its perimeter is 50cm. Find it's area if altitude corresponding to larger side is 10cm.
4. The base and height of a triangle are in ratio 3:4 and its area is $96cm^2$.find its base and height.
5. The diameter of a semi-circular protractor is 7 cm. Find its perimeter. $(\pi = \frac{22}{7})$
6. A piece of wire is bent in the shape of an Equilateral triangle of each side 6.6 cm. It is rebent to form a circular ring. What is the diameter of the ring?
7. The radius of a circular field is 20m. Inside it runs a path 5cm wide all around. Find the area of the path. $(\pi=\frac{22}{7})$
8. A path 1m wide is built along the border inside a square park of side 30m. Find the cost of covering the remaining portion of the park by grass at the rate of ₹2per sq.m.
9. A floor measuring 15m x 8m is to be laid with tiles measuring 50cm x 25 cm. Find the number of tiles required.
10. The area of a right angled triangle is 40 times its base. What is its height?

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CHAPTER – 12 (ALGEBRAIC EXPRESSIONS)

1. Write the coefficient of (i) a in $\frac{2}{3}a$ (ii) x^2y in $-\frac{4}{9}ax^2y$
2. Add: 3a + 5b – 4c and 2a – 5b - 4c
3. If IIII + ≡ +□ represents $4x^2 + 3y^2 + z$, then write the algebraic expression for ? + □□□ + I .
4. Simplify: (x - 6) + (3x - 4) + (x - 1)
5. The area of a square is $(4x^2 - 2x - 6)$ sq units. A triangle inside the square has an area $(x^2 - 4x + 5)$ sq units. Find the area of the remaining portion.
6. In a class of $(4y^2 + y - 8)$ students, $2y + 16$ play football and the rest play basketball. How many play basketball?
7. How much is $2x^2 + 7x - 5$ less than $-3x^2 + 4x - 7$?
8. Weight of an apple is 29 gm and that of a mango is 35 gm. Find the total weight of x apples and y mangoes.
9. If $4a - 3 = 13$ then find the value of $10a^2 - 5a + 6$
10. Simplify and find the value if $x = 2, a = -1, b = -3$

$$3x^2 - 8ab + 4x^2 + 11ab$$

11. Simplify: $5x + [2 - (3x - 7)]$
12. Find the perimeter of a triangle whose sides are $(3x - 7), (2x + 5), (-x + 11)$
13. What must be added to 5a – 3b + 2c to get 3a – 4b + 7c.
14. Evaluate the expression $2n^3 + 11$ for $n = 5$
15. Simplify: $3a^2 - [2a^2 - (4a^2 + b^2)]$

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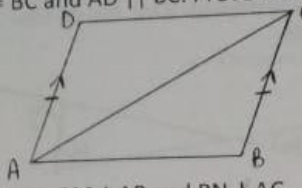
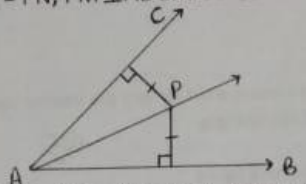
Chapter – 7 (Congruence of Triangles)

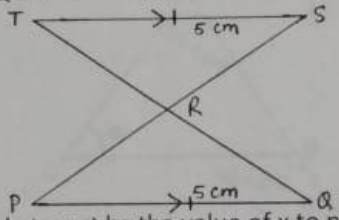
1. In the fig., AD = BC and AD || BC. Prove that AB = DC.



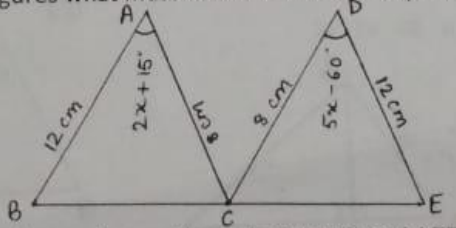
2. In the fig., PM = PN, PM ⊥ AB and PN ⊥ AC.



3. In the figure, TS || PQ and TS = PQ. Prove that the triangles PQR and STR are congruent.

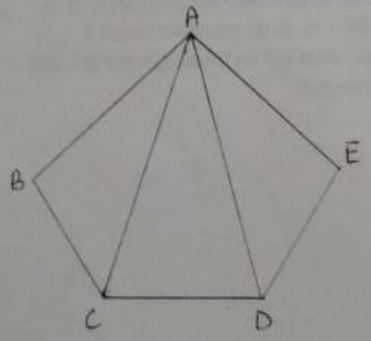


4. In the given figures what must be the value of x to prove ΔABC ≅ ΔDEC by SAS?



5. ABCDE is a regular pentagon. Show that ΔABC ≅ ΔAED.

6. Prove that ΔADE ≅ ΔBCF



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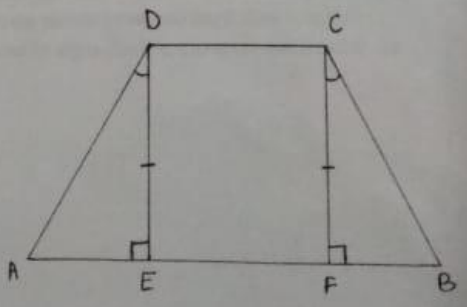

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