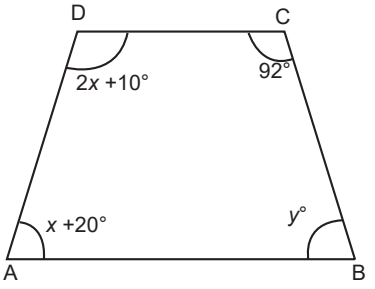
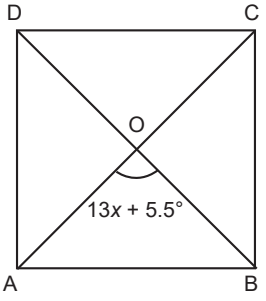
Worksheet

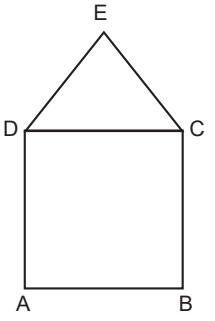
1. The angles of a quadrilateral are in the ratio 2 : 3 : 5 : 8. Find the angles.
2. In a parallelogram ABCD, $\angle D = 115°$, find the measure of $\angle A$ and $\angle B$.
3. Find the measure of all the angles of a parallelogram, if one angle is 24° less than twice the smallest angle.
4. The diagonals of a rectangle ABCD meet at O. If $\angle BOC$ is 44°, find $\angle OAD$.
5. In a trapezium ABCD, find x and y.



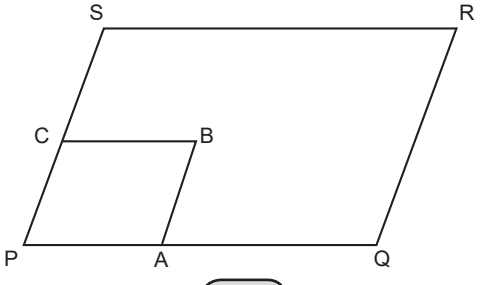
6. For what value of x will the given parallelogram ABCD become a square?



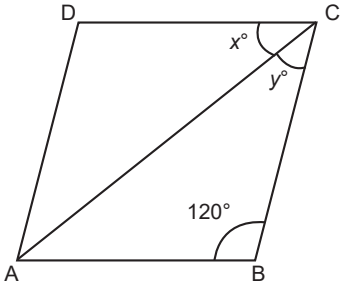
7. ABCD is a square and on the side CD, an equilateral triangle CDE is constructed. Find $\angle EDA$.



8. In the given figure, PQRS and PABC are two parallelograms. If $\angle R = 55°$, find $\angle B$ and $\angle PCB$.



9. ABCD is a rhombus in which $\angle B = 120°$. Find the value of x and y.



10. Choose the correct answer.

a. A quadrilateral which is both a rhombus and a rectangle is called a

i. rectangle ii. parallelogram iii. square iv. trapezium

b. A quadrilateral with one pair of parallel sides is called a

i. rhombus ii. trapezium iii. kite iv. rectangle

c. A quadrilateral with both pairs of opposite sides parallel and equal is called

i. rhombus ii. rectangle iii. trapezium iv. kite

d. The length of the adjacent sides of a parallelogram are in the ratio 3 : 5 and the perimeter is 80 cm, then the sides of the parallelogram in cm are

i. 3, 5 ii. 6, 10 iii. 15, 25 iv. 12, 20

e. If one angle of a quadrilateral is 60° and the rest of the angles are equal, then the measure of each equal angle is

i. 60° ii. 75° iii. 100° iv. 120°

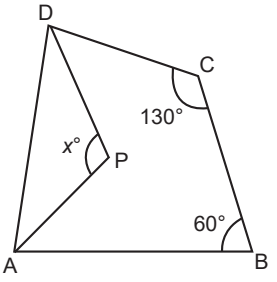
f. In the quadrilateral ABCD, AP and DP are the bisectors of $\angle A$ and $\angle D$, respectively. The value of x is

i. 100°

ii. 95°

iii. 85°

iv. 80°



11. Fill in the blanks.

a. The diagonals of a square are _____ and perpendicular to each other.

b. The diagonals of a rhombus bisect each other at _____.

c. A quadrilateral in which all the sides, diagonals and angles are equal is called _____.

d. The diagonals of a rectangle are _____.

e. If the diagonals of a parallelogram are equal, it is a _____.

f. The sum of the adjacent angles of a parallelogram is _____.

12. Tick (✓) if the property is satisfied and cross (✗) otherwise.

S. No.	Property	Square	Rectangle	Parallelogram	Trapezium	Rhombus
a.	All sides are equal					
b.	All angles are equal					
c.	Opposite sides are equal					
d.	Opposite angles are equal					
e.	Diagonals are equal					
f.	Diagonals bisect each other at right angle					
g.	Angles between adjacent sides are 90°					

Answers to Worksheet

1. 40°, 60°, 100°, 160°
2. $\angle A = 65°$, $\angle B = 115°$
3. 68°, 112°, 68°, 112°
4. 68°
5. $x = 50°$, $y = 88°$
6. 6.5°
7. 150°
8. $\angle B = 55°$, $\angle PCB = 125°$
9. $x = y = 30°$
10. a. iii b. ii c. i d. iii e. iii f. ii
11. a. equal b. right angle c. square d. equal
    e. square/rectangle f. 180°
12.

S. No.	Square	Rectangle	Parallelogram	Trapezium	Rhombus
a.	✓	✗	✗	✗	✓
b.	✓	✓	✗	✗	✗
c.	✓	✓	✓	✗	✓
d.	✓	✓	✓	✗	✓
e.	✓	✓	✗	✗	✗
f.	✓	✗	✗	✗	✓
g.	✓	✓	✗	✗	✗