



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



CLASS 8

SUBJECT :Algebra and Geometry

Worksheet 1 answer key

Marks:15

QUADRILATERAL

Date:7.4.2020

Answer all the following questions($1 \times 15 = 15$)

1. Three angles of a quadrilateral are 80° , 95° and 112° . Its fourth angle is
- 78°
 - 73°
 - 85°
 - 100°

Answer:b

Explanation: $80+95+112+x=360$, $x=360-287=73^\circ$

2. The angles of a quadrilateral are in the ratio 3:4:5:6. The smallest angle is
- 45°
 - 60°
 - 36°
 - 48°

Answer:b

Explanation: $3x+4x+5x+6x=360$, $x=20$, $(3 \times 20) = 60^\circ$

3. In quadrilateral ABCD, angle A = 120° and the rest of the angles are all equal, then angle B is
- 80°
 - 60°
 - 45°
 - None of these

Answer:a

Explanation: $120+x+x+x=360$, $x=240 \div 3 = 80^\circ$

4. Number of pairs of opposite sides of a quadrilateral is
- 1
 - 4
 - 2
 - none of these

Answer:c

Explanation:AB, CD and AD, BC

5. A quadrilateral with equal sides and equal angles is a
- a) rectangle
 - b) square
 - c) kite
 - d) none of these

Answer:b

Explanation:Square has all sides equal and each angle is 90°

6. In quadrilateral ABCD, if AO and BO are the bisectors of angle A and angle B respectively, angle $C=70^\circ$ and angle $D=30^\circ$.Then angle AOB=?
- a) 40°
 - b) 50°
 - c) 80°
 - d) 100°

Answer:b

Explanation: angle A + angle B = $360 - (30 + 70) = 260$,
(angle A + angle B) / 2 = 130,
Angle AOB = $180 - 130 = 50^\circ$

7. If the sides of a quadrilateral are produced in order, the sum of four exterior angles so formed is
- a) 360°
 - b) 180°
 - c) 90°
 - d) 270°

Answer:a

Explanation:By property

8. A quadrilateral is a figure made of four line segments no three of which are
- a) parallel
 - b) coincident
 - c) collinear
 - d) none of these

Answer:c

Explanation:If three points lie on a straight line, then they are collinear

9. In a quadrilateral PQRS, PR and QS are known as its
- a) sides
 - b) angles
 - c) altitudes
 - d) diagonals

Answer:d

Explanation:By definition

10. The sum of the angles of a quadrilateral is equal to
- a) 4 right angles
 - b) 2 right angles

- c) 6 right angles
- d) none of these

Answer:a

Explanation:2 triangles are formed by a diagonal.So sum of angles of 2 triangles= $180+180=360^{\circ}=4\times 90$

11. A diagonal divides a quadrilateral into how many triangles?

- a) 3
- b) 2
- c) 1
- d) 0

Answer:2

Explanation:Join vertices A and C

12. How many pairs of adjacent angles does a quadrilateral have?

- a) 2
- b) 1
- c) 6
- d) 4

Answer:d

Explanation:angles A, B; angles B, C ; angles C, D ;angles D, A

13. The fourth angle of the quadrilateral that has three acute angles is

- a) acute
- b) right
- c) obtuse
- d) straight

Answer:c

Explanation:let the three acute angles be 89° each.fourth angle= $360-267=93^{\circ}$ which is obtuse

14. If the angles of a quadrilateral are x° , $(2x+13)^{\circ}$, $(3x+10)^{\circ}$, $(x-6)^{\circ}$, find x

- a) 49°
- b) 14°
- c) 7°
- d) none of these

Answer:a

Explanation: $x+2x+13+3x+10+x-6=360$, $x=343/7 =49^{\circ}$

15. If the sum of three exterior angles of a quadrilateral is 270° , then the fourth exterior angle is

- a) 120°
- b) 90°
- c) 360°
- d) 75°

Answer:b

Explanation: $360-270=90^{\circ}$

