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BFW-051

B.Sc. IN LEATHER GOODS AND ACCESSORIES DESIGN (BSCLGAD)

Term-End Examination

December, 2011 00402

BFW-051 : GEOMETRY CONSTRUCTION

Time : 3 hours *Maximum Marks : 70*

Note : *All questions are* ***compulsory.*** *Use of* ***scientific calculator*** *is permitted.*

1. Illustrate and explain the followings : **5**

(a) Acute Angle (b) Right Angle

(c) Obtuse Angle (d) Straight Angle

2. Name the platonic solids having : **5**

(a) 04 faces (b) 06 faces

(c) 08 faces (d) 10 faces

(e) 20 faces

3. (a) Cube has_____faces_____vertices (corner points), _____edges. **5x3=15**

(b) Tetrahedron has_____ faces _____ vertices _____ edges.

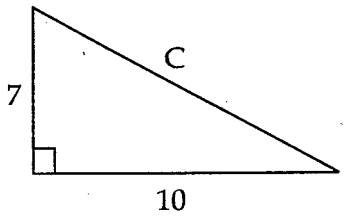
(c) Octahedron has _____ faces _____ vertices _____ edges.

(d) Dodecahedron has _____ faces _____ vertices _____ edges.

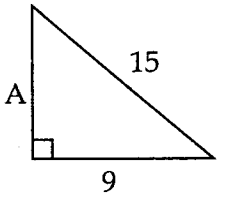
(e) Icosahedron has _____ faces _____ vertices _____ edges.

4. Solve the following triangle. **10**

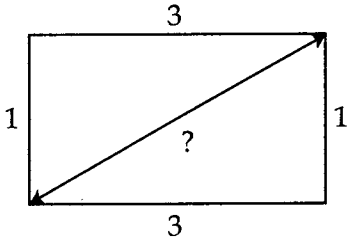
(a)



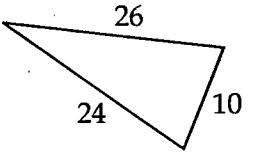
(b)



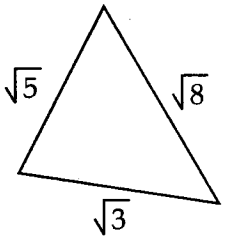
5. What is the diagonal distance in the given diagrams ? **5**



6. Does this triangle have right angle ? **3**



7. Do the triangle given below have a Right Angle ? Explain. 3



8. Does an 8, 15, 16, Triangle have a Right Angle ? Or Does $8^2+15^2=16^2$? 3

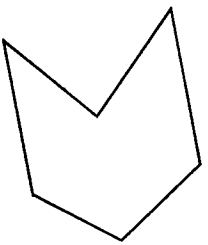
9. Read each clue and then decide on the most specific name possible for the polygon being described. 6

(a) It is a closed polygon with no parallel sides. It has no right angles. All sides and angles are congruent. It has as many diagonal as it has sides. It's diagonals form a star.

(b) It is a closed polygon with two right angles. It has one pair of parallel sides. It has only one line of symmetry. It you cut along any one diagonal, you will create one triangle and one quadrilateral.

10. Which of the following most accurately describes the polygon in the diagram ? 6

(a)



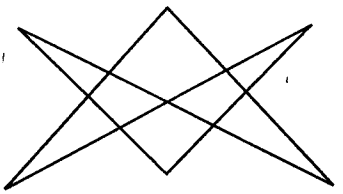
(i) Regular Hexagon

(ii) Irregular convex hexagon

(iii) Irregular concave hexagon

(iv) Complex Hexagon

(b)



(i) Regular Hexagon

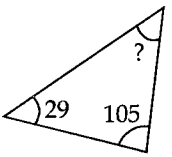
(ii) Irregular concave heptagon

(iii) Irregular heptagon

(iv) Irregular complex hexagon

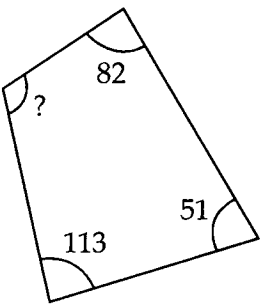
11. Find the interior angles in each of the polygons illustrated below : **9**

(a)



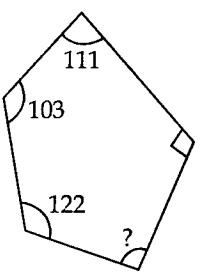
(i) 29° (ii) 36°
(iii) 46° (iv) 56°

(b)



(i) 134° (ii) 129°
(iii) 124° (iv) 114°

(c)



(i) 108° (ii) 114°
(iii) 124° (iv) 129°