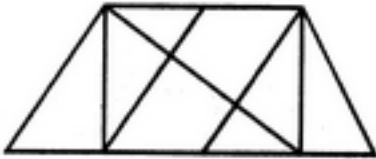




DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND  
MACHINE LEARNING  
19GET275 - VQAR-1

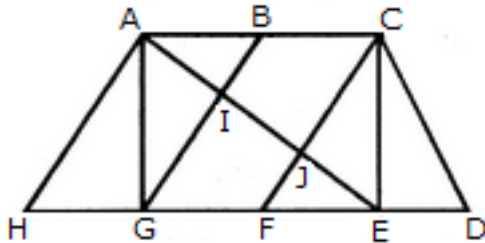
1.  
Find the number of triangles in the given figure.



- 8
- 10
- 12
- 14

**Answer:** Option  
**Explanation:**

The figure may be labelled as shown.



The simplest triangles are AHG, AIG, AIB, JFE, CJE and CED i.e. 6 in number.

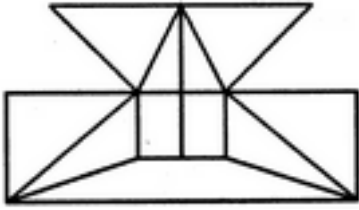
The triangles composed of two components each are ABG, CFE, ACJ and EGI i.e. 4 in number.

The triangles composed of three components each are ACE, AGE and CFD i.e. 3 in number.

There is only one triangle i.e. AHE composed of four components.

Therefore, There are  $6 + 4 + 3 + 1 = 14$  triangles in the given figure.

2.  
Find the minimum number of straight lines required to make the given figure.

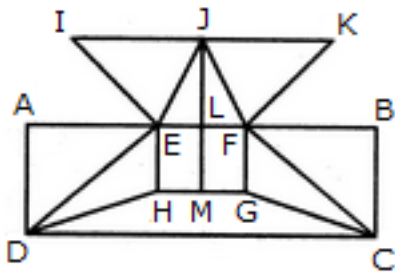


- 16
- 17
- 18
- 19

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.



The horizontal lines are IK, AB, HG and DC i.e. 4 in number.

The vertical lines are AD, EH, JM, FG and BC i.e. 5 in number.

The slanting lines are IE, JE, JF, KF, DE, DH, FC and GC i.e. 8 is number.

Thus, there are  $4 + 5 + 8 = 17$  straight lines in the figure.

3.

Find the number of triangles in the given figure.



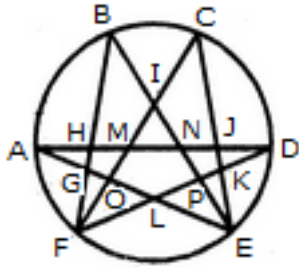
- 22
- 24
- 26
- 28

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.

A.CATHERINE/AP/AIML



The simplest triangles are AGH, GFO, LFO, DJK, EKP, PEL and IMN i.e. 7 in number.

The triangles having two components each are GFL, KEL, AMO, NDP, BHN, CMJ, NEJ and HFM i.e. 8 in number.

The triangles having three components each are IOE, IFP, BIF and CEI i.e. 4 in number.

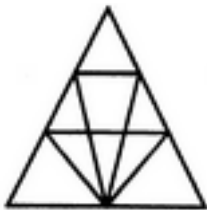
The triangles having four components each are ANE and DMF i.e. 2 in number.

The triangles having five components each are FCK, BGE and ADL i.e. 3 in number.

The triangles having six components each are BPF, COE, DHF and AJE i.e. 4 in number.

Total number of triangles in the figure =  $7 + 8 + 4 + 2 + 3 + 4 = 28$ .

4.  
Find the number of triangles in the given figure.

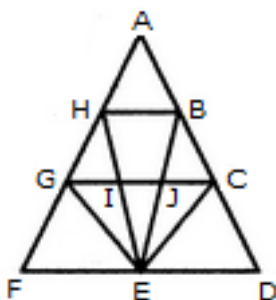


- 12
- 18
- 22
- 26

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.



A.CATHERINE/AP/AIML

The simplest triangles are AHB, GHI, BJC, GFE, GIE, IJE, CEJ and CDE i.e. 8 in number.

The triangles composed of two components each are HEG, BEC, HBE, JGE and ICE i.e. 5 in number.

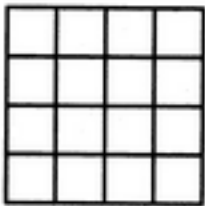
The triangles composed of three components each are FHE, GCE and BED i.e. 3 in number.

There is only one triangle i.e. AGC composed of four components.

There is only one triangle i.e. AFD composed of nine components.

Thus, there are  $8 + 5 + 3 + 1 + 1 = 18$  triangles in the given figure.

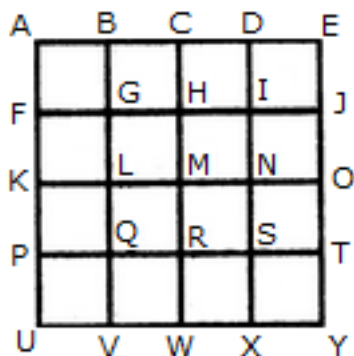
Count the number of squares in the given figure.



- 32
- 30
- 29
- 28

**Answer:** Option  
**Explanation:**

The figure may be labelled as shown.



The simplest squares are ABGF, BCHG, CDIH, DEJI, FGLK, GHML, HINM, IJON, KLQP, LMRQ, MNSR, NOTS, PQVU, QRWV, RSXW and STYX i.e. 16 in number.

The squares composed of four components each are ACMK, BDNL, CEOM, FHRP, GISQ, HJTR, KMWU, LNXV and MOYW i.e. 9 in number.

The squares composed of nine components each are ADSP, BETQ, FIXU and GJYV i.e. 4 in number.

There is one square AEYU composed of sixteen components.

There are  $16 + 9 + 4 + 1 = 30$  squares in the given figure.

Find the number of triangles in the given figure ?



A) 5

B) 8

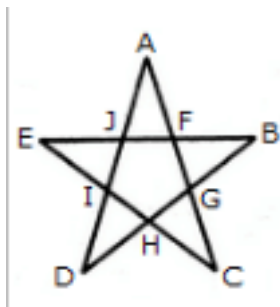
C) 9

D) 10

**Answer & Explanation** Answer: D) 10

**Explanation:**

The given figure can be labelled as :



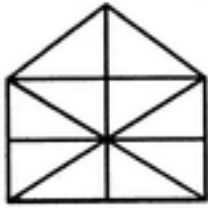
The simplest triangles are AJF, FBG, HDI, GCH and JEI i.e 5 in number.

The triangles composed of the three components each are AIC, FCE, ADG, EBH and DJB i.e 5 in number.

Thus, there are  $5 + 5 = 10$  triangles in the given figure.

Find the number of triangles in the given figure.

A.CATHERINE/AP/AIML

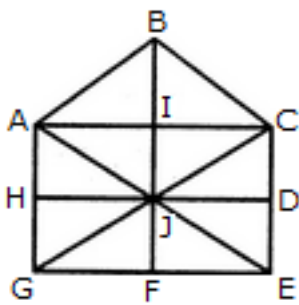


- 10
- 19
- 21
- 23

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.



The simplest triangles are ABI, BIC, AIJ, CIJ, AHJ, CDJ, JHG, JDE, GJF and EJF i.e. 10 in number.

The triangles composed of two components each are ABC, BCJ, ACJ, BAJ, AJG, CJE and GJE i.e. 7 in number.

The triangles composed of four components each are ACG, ACE, CGE and AGE i.e. 4 in number.

Total number of triangles in the figure =  $10 + 7 + 4 = 21$ .

Find the number of triangles in the given figure.

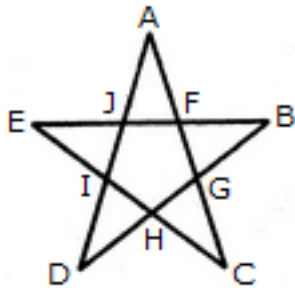


- 5
- 6
- 8
- 10

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.

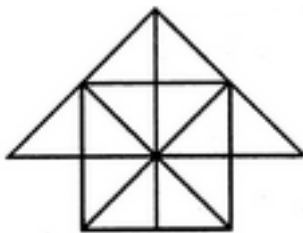


The simplest triangles are AJF, FBG, GCH, HDI and IEJ i.e. 5 in number.

The triangles composed of three components each EBH, AIC, EFC, ADG and BJD i.e. 5 in number.

Thus, there are  $5 + 5 = 10$  triangles in the figure.

Count the number of triangles and squares in the given figure.

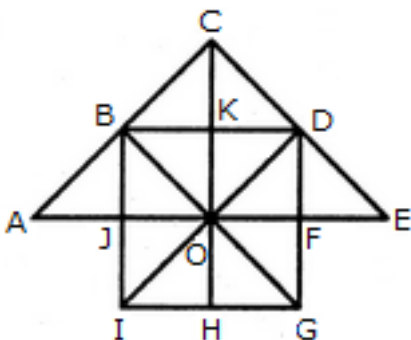


- 26 triangles, 5 squares
- 28 triangles, 5 squares
- 26 triangles, 6 squares
- 28 triangles, 6 squares

**Answer:** Option

**Explanation:**

The figure may be labelled as shown.



**Triangles:**

The simplest triangles are JBO, BKO, KDO, DFO, FGO, GHO, HIO, IJO, ABJ, BCK, CKD and DEF i.e. 12 in number.

The triangles composed of two components each are IBO, BDO, DGO, GIO, ABO, CDO, CBO, CBD and DEO i.e. 9 in number.

The triangles composed of four components each are IBD, BDG, DGI, GIB, ACO and COE i.e. 6 in number.

There is only one triangle i.e. ACE composed of eight components.

Thus, there are  $12 + 9 + 6 + 1 = 28$  triangles in the given figure.

**Squares:**

The squares composed of two components each are BKOJ, KDFO, OFGH and JOHI i.e. 4 in number.

There is only one square i.e. CDOB composed of four components.

There is only one square i.e. BDGI composed of eight components.

Thus, there are  $4 + 1 + 1 = 6$  squares in the given figure.