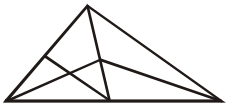
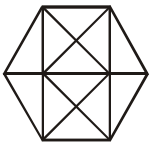
EXERCISE

1. How many triangles are there in the following figure ?



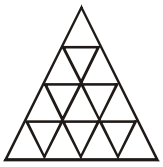
(a) 11 (b) 13
(c) 9 (d) 15

2. How many triangles are there in the following figure ?



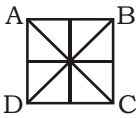
(a) 20 (b) 24
(c) 28 (d) 32

3. How many triangles are there in the following figure ?



(a) 29 (b) 27
(c) 23 (d) 30

4. How many triangles are there in the given figure ?

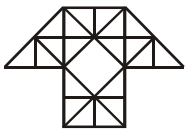


(a) 16 (b) 14
(c) 8 (d) 12

5. How many rectangles are there in the given diagram ?

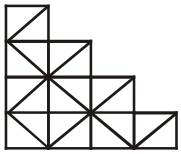
(a) 4 (b) 7
(c) 19 (d) 18

6. How many triangles are there in the given figure ?



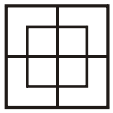
(a) 29 (b) 38
(c) 35 (d) None of these

7. How many squares are there in the given figure ?



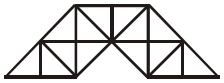
(a) 10 (b) 11
(c) 12 (d) 14

8. How many squares are there in the given figure ?



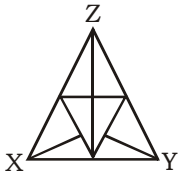
(a) 7 (b) 12
(c) 8 (d) 10

9. Count the number of triangles in the following figure.



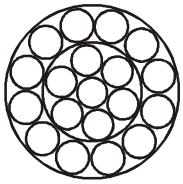
(a) 27 (b) 23
(c) 31 (d) None of these

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



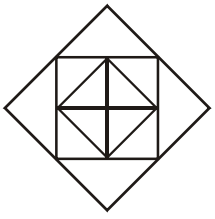
(a) 17 (b) 15
(c) 13 (d) 9

11. How many circles are there in this figure ?



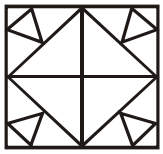
(a) 19 (b) 18
(c) 17 (d) 21

12. How many squares are there in this figure?



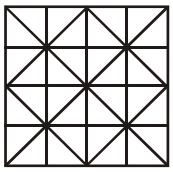
(a) 19 (b) 7
(c) 17 (d) 21

13. How many triangles are there in this figure ?



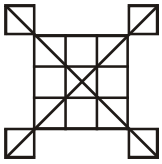
(a) 24 (b) 26
(c) 28 (d) 20

14. Find out the number of squares in the given pattern.



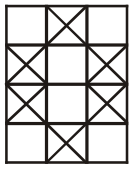
(a) 26 (b) 30
(c) 35 (d) 38

15. Find out the number of squares in the given figure.



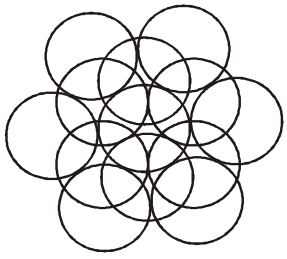
(a) 13 (b) 14
(c) 17 (d) 18

16. Find out the number of square in the given pattern.



(a) 20 (b) 23
(c) 12 (d) 18

17. How many circles are there in the following figure ?

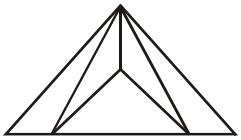


(a) 12 (b) 13
(c) 14 (d) 11

18. How many triangles are there in the given figure ?

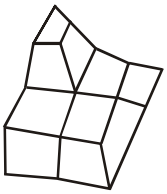
(a) 7 (b) 10
(c) 8 (d) 9

19. Find the number of triangles in the given figure:



(a) 6 (b) 7
(c) 8 (d) 9

20. The figure below is a drawing of a pile of blocks. When taken apart, how many blocks would be there ?

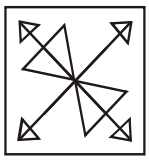


(a) 6 (b) 3
(c) 4 (d) 5

21. How many triangles are there in this figure ?
Question Figure:

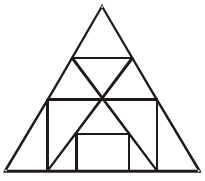
(a) 12 (b) 14
(c) 16 or more (d) 10

22. Find out the number of triangles in this figure.



(a) 12 (b) 14
(c) 16 (d) 18

23. Find out the number of triangles in the given figure.

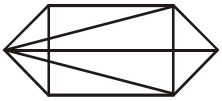


(a) 13 (b) 15
(c) 16 (d) 17

24. Find out the number of triangles in the given figure.

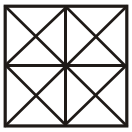
(a) 34 (b) 38
(c) 44 (d) 48 or more

25. Find the number of triangles in the given figure:



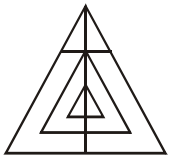
(a) 11 (b) 14
(c) 16 (d) 22 or more

26. How many triangles are there in the given figure?



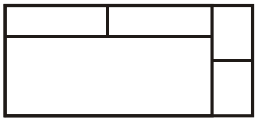
(a) 40 or more (b) 16
(c) 18 (d) 28

27. How many triangles are there in the given figure ?



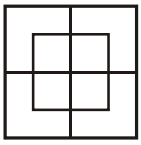
(a) 11 (b) 12 or more
(c) 9 (d) 10

28. How many rectangles are there in the question figure ?



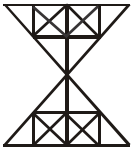
(a) 6 (b) 7
(c) 8 (d) 9

29. How many rectangle are there in the given figure ?



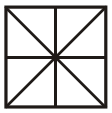
(a) 6 (b) 4
(c) 8 (d) 10 or more

30. How many triangles are there in the given figure ?



(a) 48 (b) 60
(c) 56 (d) 52

31. How many quadrilaterals are there in the following figure ?



(a) 6 (b) 7
(c) 8 (d) 9

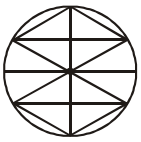
32. How many triangles are there in the following square ?

(a) 11 (b) 7
(c) 8 (d) 6

33. How many faces can you count in this 3 dimensional model ?

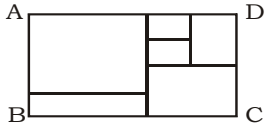
(a) 12 (b) 14
(c) 16 (d) 18

34. How many triangles are embeded in the figure given below ?



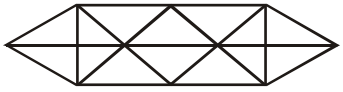
(a) 16 (b) 6
(c) 22 (d) 24

35. How many rectangles are there in the figure ABCD ?



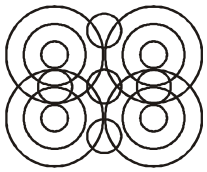
(a) 11 (b) 12
(c) 9 (d) 10

36. How many triangles are there in the figure ?



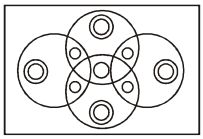
(a) 24 (b) 14
(c) 28 (d) 20

37. Find out the number of circles in the given figure:



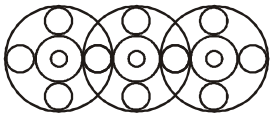
(a) 14 (b) 16
(c) 17 (d) 18

38. How many circles are there in this figure ?



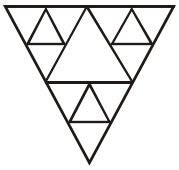
(a) 16 (b) 13
(c) 17 (d) 22

39. Find out the number of circles in the given figure.



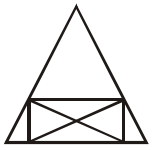
(a) 18 (b) 19
(c) 16 (d) 20

40. The number of triangle in the following diagram is:



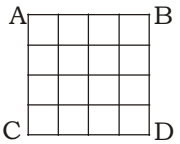
(a) 13 (b) 14
(c) None (d) 17

41. Find the number of triangles in the following figure:



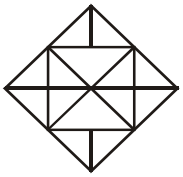
(a) 14 (b) 10
(c) 12 (d) 8

42. How many squares are there in the square figure ABCD ?



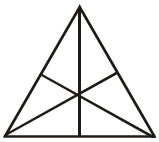
(a) 16 (b) 17
(c) 26 (d) 30

43. How many triangles are there in the following figure ?



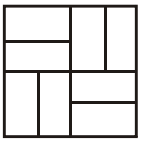
(a) 18 (b) 28
(c) 20 (d) 24

44. How many triangles are there in the following figure ?



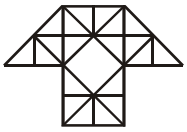
(a) 16 (b) 13
(c) 9 (d) 7

45. How many rectangles are there in the given figure ?



(a) 24 (b) 16
(c) 21 (d) 14

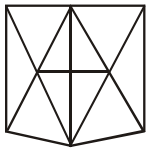
46. How many triangles are there in the given figure ?



(a) 29 (b) 38
(c) 35 (d) None of these

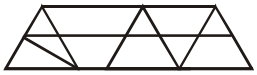
Directions (47-48):- How many triangles are there in the following figure?

47.



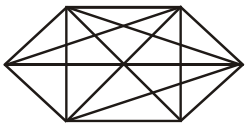
(a) 26 (b) 24
(c) 18 (d) 20

48.



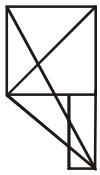
(a) 7 (b) 8
(c) 9 (d) 11

49. Find diagonals



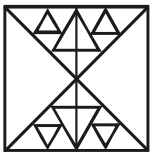
(a) 10 (b) 12
(c) 8 (d) 6

50. How many triangles are there in the following figure?



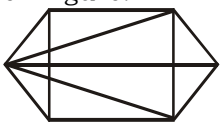
(a) 12 (b) 11
(c) 15 (d) 13

51. Find out the number of triangles in the given figure.



(a) 34 (b) 38
(c) 44 (d) 48 or more

52. Find the number of triangles in the given figure:



(a) 11 (b) 14
(c) 16 (d) 22 or more

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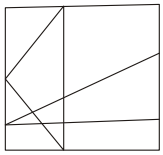
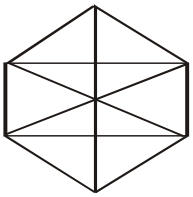
53. How many triangles are there in the given figure?



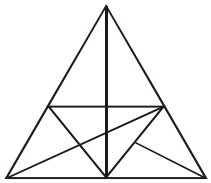
(a) 11 (b) 9
(c) 10 (d) 12

54. How many triangles are in the given figure ?



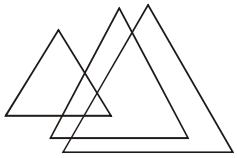
(a) 20 (b) 22
(c) 28 (d) 32

55. How many triangles are there in the given figure?



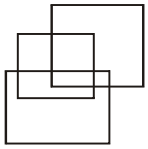
(a) 24 (b) 30
(c) 28 (d) 29

56. How many triangles are there in the given figure?



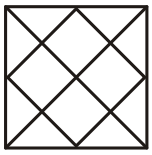
(a) 4 (b) 5
(c) 6 (d) 7

57. How many rectangles are there in the given figure?



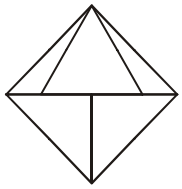
(a) 9 (b) 10
(c) 11 (d) 12

58. How many triangles are there in the given figure?



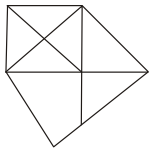
(a) 20 (b) 23
(c) 24 (d) 26

59. How many triangles are there in the given figure?



(a) 8 (b) 9
(c) 10 (d) 12

60. How many triangles are there in the given figure?



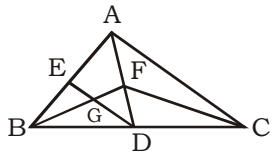
(a) 11 (b) 12
(c) 15 (d) 13

Answer Key

1. (b)	7. (d)	13. (c)	19. (d)	25. (d)	31. (d)	37. (c)	43. (b)	49. (c)	55. (c)
2. (c)	8. (d)	14. (c)	20. (d)	26. (a)	32. (c)	38. (c)	44. (a)	50. (c)	56. (c)
3. (b)	9. (d)	15. (d)	21. (c)	27. (b)	33. (d)	39. (b)	45. (c)	51. (d)	57. (c)
4. (a)	10. (a)	16. (b)	22. (d)	28. (d)	34. (a)	40. (d)	46. (d)	52. (d)	58. (a)
5. (d)	11. (d)	17. (b)	23. (c)	29. (d)	35. (a)	41. (a)	47. (a)	53. (c)	59. (b)
6. (d)	12. (b)	18. (b)	24. (d)	30. (b)	36. (c)	42. (d)	48. (d)	54. (b)	60. (c)

SOLUTION

1. (b)



The triangles are:

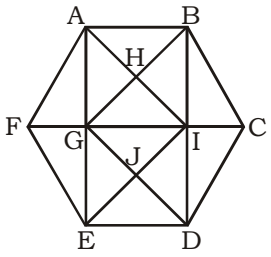
D ABC ; D ABD ; D ADC ; D AFC

D FDC ; D AFB ; D FDB ; D FBC

D GBD ; D ADE ; D GBE ; D FDG

D DBE ;

2. (c)



The triangles are:

D FEB ; D CBD ; D FAG ; D FEG

D BCI ; D CDI ; D AFI ; D EFI

D BGC ; D DCG ; D AGI ; D BIH

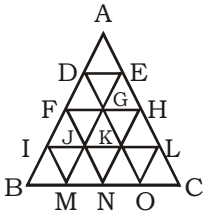
D AGB ; D ABI ; D HAB ; D HBI

D HGI ; D HAG ; D GEI ; D GED

D IDE ; D IDG ; D JGI ; D JDI

D JGE ; D JDE ; D AIE ; D BGD

3. (b)



D ABC ; D ADE ; D AFH ; D AIL

D DFG ; D DIK ; D DBO ; D GDE

D EGH ; D EJL ; D EMC ; D FIJ

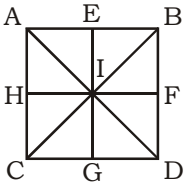
D FBN ; D JFG ; D GJK ; D KGH

D HKL ; D HNC ; D NFH ; D GMO

D IBM ; D MIJ ; D JMN ; D NJK

D KNO ; D OKL ; D LOC

4. (a)



The triangles are:

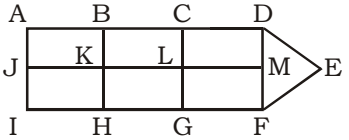
D AIH ; D AIE ; D EIB ; D BFI;

D IHC ; D IGC ; D IGD ; D DFI;

D IAB ; D IBD ; D ICD; D IAC;

D BAC ; D ACD ; D BDC; D BDA;

5. (d)



The rectangles are:

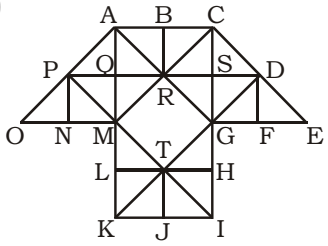
ABKJ ; JKHI ; BCLK ; KLGH

CDML ; CDML ; LMFG ; ACGI;

ACGI ; ACLJ ; JLGI ; BGFH ; BDFH ; BDMK ; KMFH ; ADFI ; ADMJ ; JMFI ; (ADFI ; ADMJ ; ADMJ ; JMFI ; ABHI ; BCGH and CDFG are squares.)

We know that every square is a rectangle. But its reverse is not always true.

6. (d)



The simplest triangles are:

D PNO; D PNM ; D MPO ; D MQR;

D MQR;D AQP;D AQP ; D AQR

D BRA ; D BRC ; D SRC ; D SCD

D DFG; D DFE ; D TLM ; D TJK

D TLK; D TIH;

The triangles composed of two components are:

D PON; D PMA ; D APR ; D RAM;

D RAC;D RAC;D RGC ; D DGC

D DGE; D MPR ; D GRD ; D DCR;

D TMK; D TKI; D TIG

The triangles composed of four components are:

D AMO;D AMC;D CAG; D CGE

D MKI; D GIK

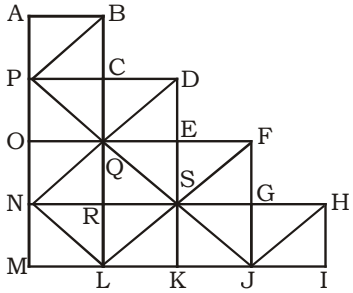
Other triangles are

D SPI ; D DQK, D PTD

Total number of triangles

18 + 14 + 6 + 2 + 1 = 41

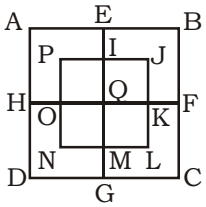
7. (d)



The squares are:

ABCP ; PCQO ; CDEQ ; OQRN ; QESR ; EFGS ; NRLM ; RSK: SGJK ; GHIJ ; PDSN ; OEKM ; QFJK ; NQSL

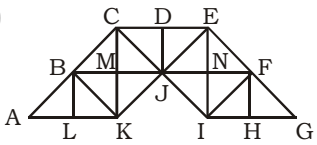
8. (d)



The squares are:

ABCD ; AEQH ; EBFQ ; HQGD; QFCG ; PJLN ; PIQO ; IJKQ; OQMN ; QKLM

9. (d)



The triangles are:

D ABL; D BLK ; D BMK ; D BMC;

D CMJ;D CDJ;D DEJ ; D MKJ

D EJN; D JIN ; D ENF ; D NFI;

D FIH; D FGH; D ABK ;D BCK;

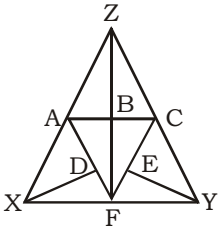
D KAC;D BCJ;D KBJ;D JCE;

D EFJ; D IFJ ; D FEI ; D FGI;

D CKE; D CEI ; D EGI; D CJK;

D EJI

10. (a)



The triangles are:

D ZAB; D ZBC ; D XAD ; D XDF;

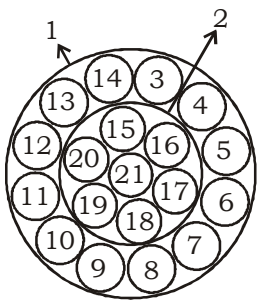
D FAB;D FBC;D YEC ; D FEY;

D ZAC; D XAF ; D YFC ; D FAC;

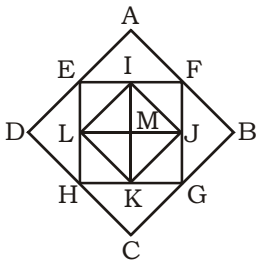
D ZFX; D ZFY; D AFZ ;D CFZ;

D ZXY

11. (d)



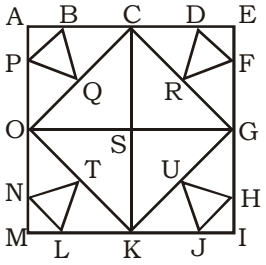
12. (b)



The squares are :

EFGH, EIML, IFJM, MJGK, LMKH, ABCD, IJKL

13. (c)



The triangles are:

D ABP;D BQP;D PQO ; D BCQ

D ACO; D CSO ; D CDR ; D DRF;

D DEF;D RFG; D CSG ;D ECG;

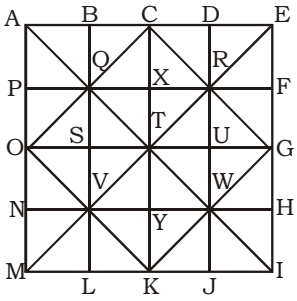
D IJH; D JUH ; D GHU; D JKU

D GIH;D SGK ; D ONT;D NTL;

D NML ; D TLK; D MOK; D SOK;

D CGO; D GKC; D KGO; D COK

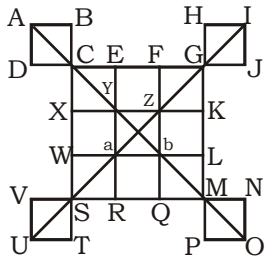
14. (c)



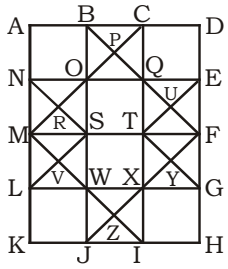
The squares are:

ABQP, BCXQ, CDRX, DEFR, PQSO, QXTS, XRUT, RFGU, OSVN, STYV, TUWY, UGHW, NVLM, VYKL, YWJK, WHIJ, ACTO, CEGT, OTKM, TGIK, BDUS, SUJL, QRWV, PXYN, XFHY, OQTV, VTWK, OCRT, TRGW, OCGK, AEIM, ADWN, BEHV, PRJM, QFIL

There are 35 squares.

15. (d) 

13 + 4 + 1 = 18

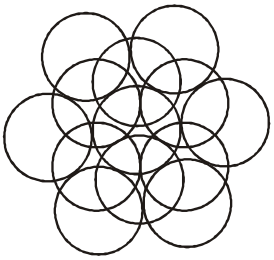
16. (b) 

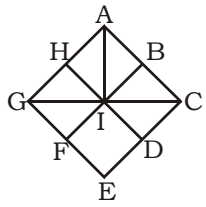
The squares are:

ABON, BCQO, CDEQ, NOSM, OQTS, QFDT, MSWL, STXW, TFGX, LWJK, WXIJ, XGHI, ACTM, BDFS, NQXL, OEGW, MTIK, SFHJ, ADGL, NEHK, MRSV, TUFY, MPFZ

Thus, there are 23 squares.

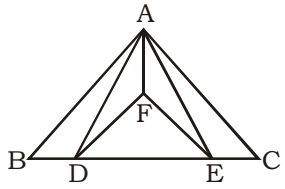
17. (b) There are altogether 13 circles.



18. (b) 

The triangles are:

AIH, AIB, BIC, CID, GIH, GIF, ECG, ACG, AIG, AIC

19. (d) 

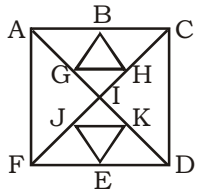
The triangles are :

D ABC ; D ABD ; D FAD ;

D FAE ; D FDE ; D AEC ;

D ADE ; D ABE ; D ADC

20. (d) Four blocks are visible and one block is hidden.

21. (c) 

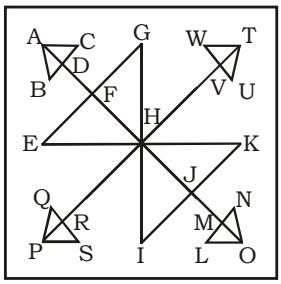
The triangles are:

D AGB; D BGH; D BHC; D IGH

D IJK ; D JKE; D KED ; D JEF

D IAC ; D ICD ; D IFD ; D IAF

D CAD ; D DCF ; D AFD ; D AFC

22. (d) 

Each unit consists of three traingles and there are six units. So, the total number of triangles would be 18.

The triangles are:

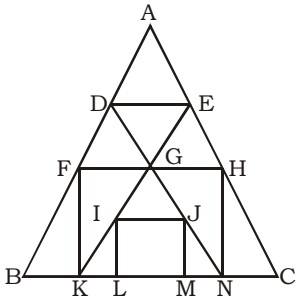
D ABD; D ADC; D ABC; D HEF

D HFG; D HEG; D HIJ; D HJK

D HIK ; D OLM ; D OMN ; D OLN

D PRS ; D PRQ ; D PSQ ; D TVU;

D TVW ; D TUW

23. (c) 

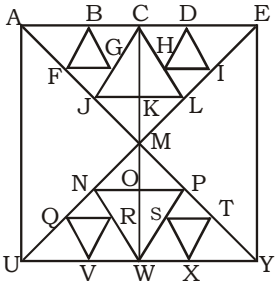
The triangles are:

D ADE; D GDE; D DFG; D EGH

D FKB; D FGK; D GIJ; D GHN

D HNC; D ILK; D JMN; D AFH

D DBN; D GKN; D EKC; D ABC

24. (d) 

The triangles are:

D AFB ; D BFG; D GBC; D CKJ

D JGF; D KMJ; D JCM ; D ACJ

D ACM; D HCD ; D DIH ; D IDE

D CKL ; D LHI ; D LKM ; D LCM

D CLE ; D CME; D MON; D WON

D RVW; D QUV; D NRQ ; D NUW

D MNW; D MWU; D VRQ; D MOP

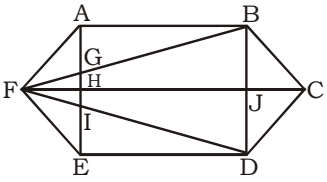
D OPQ ; D SWX ; D XTS ; D TXY

D PST ; D PMW; D PWY; D MWY

D CJL; D MAE; D MAU ; D MEY

D MUY; D WPN; D AEU; D EAY

D EYU ; D AUY ; D MLJ ; D MPN

25. (d) 

The triangles are:

D AGF; D GHF; D FIH ; D FIE

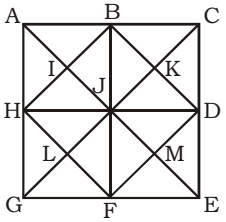
D AFH; D AIF; D FEA; D FIG

D FEG ; D FEH; D BAG ; D BJG

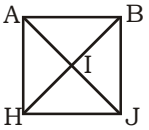
D CDJ ; D CBD; D DEI; D AFB

D DEF; D FJB; D FCB ; D FCD

D FJD; D FBD

26. (a) 

First of all take one block and count the number of triangles:



The triangles are:

D IAB; D IJB; D IAH ; D IHJ

D AHB; D ABJ; D AHJ; D BJH

There are four such blocks.

Therefore, the number of blocks.

Therefore, the number of simple triangles = 4 × 8 = 32

Now, count the composite triangles:

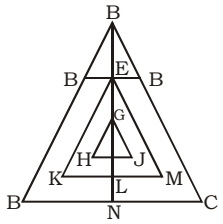
D JAC ; D JAG; D JCE ; D JGE

D BHD ; D DBF; D FDH; D HBF

D AGE;D CEG; D CAE ; D AGC;

Thus, there are more than 40 triangles.

27. (b)



The triangles are:

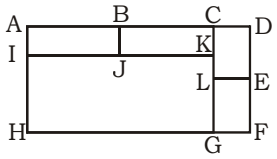
D ADF; D ADE; D AFE; D EKM

D ELK ; D ELM; D ELM; D GHJ

D GIH; D GIJ; D ABC ; D ANB;

D ANC

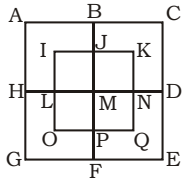
28. (d)



The Rectangles are :

ABJI ; BCKJ; CDEL; LEFG ; IKGH ; CDFG ; ACGH; ACKI ; ADFH

29. (d)

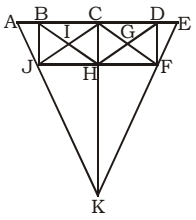


The rectangles are:

IJPO ; JKQP ; IKNL ; LNQO ; ABFG; BCEF; ACDH; HDEG; Square are also rectangles ; there are 10 squares;

ABMH; BCDM ; HMFG ; MDEF; IJML; JKNM; MNQP; LMPO; ACEG; IKQO

30. (b) Count the number of triangles in the upper part and take its double to get the total number of triangles.



The triangle are:

D ABJ ; D IBJ; D IBC ; D ICH

D IJH ; D BJH; D CHJ; D CBH

D BCJ; D GCH; D GCD; D GDF

D GHJ; D CHF; D DFH; D DCF;

D CDH; D DEF; D KHJ; D KHF;

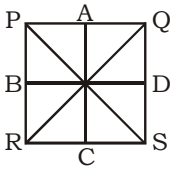
D KCA; D KCE; D JAC; D HBD;

D FCE; D CJF; D KJC; D KFC;

D KAE; D KJF;

Now total number of triangles = 2 × 30 = 60

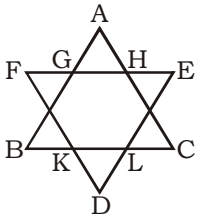
31. (d)



Quadrilaterals are:

PAOB; AQDO; BOCR; ODSC; PQDB; BDSR; PACR; AQSC; PQSR

32. (c)



The triangles are:

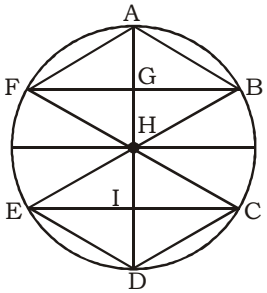
D AGH; D EHI; D CIL; D DKL;

D BJK; D FGJ; D ABC; D DEF

33. (d) Two faces (front and rear) are common for all the four cubes. Therefore, each cube has 6 – 2 = 4 faces. Thus, total number of faces

= 4 × 4 + 2 = 18

34. (a)



The triangles are:

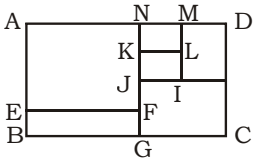
D AGF ; D AGB ; D AFB ; D HGF

D HGB ; D HFB ; D HIE ; D HIC

D HEC ; D DIE ; D DIC ; D DEC

D FHA ; D BHA ; D CHD ; D EHD

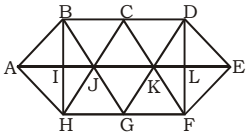
35. (a)



The rectangles are:

ANFE; EFGB; JHCG; NDHJ; NMLK; KLIJ; MDHI; ANGB; NDCG; ABCD; NMIJ

36. (c)



D ABI ; D AHI ; D ABH ; D BJI

D HJI ; D JBH ; D JBC ; D JHG

D CJK ; D GKJ ; D KCD ; D KGF

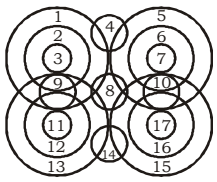
D KDF ; D DLE ; D FLE ; D EDF

D DLK ; D FLK ; D BGH ; D BHC

D CHF ; D GBD ; D DFC ; D DFG

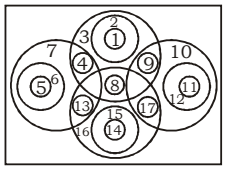
D BAJ ; D HAJ ; D DKE ; D FKE

37. (c)

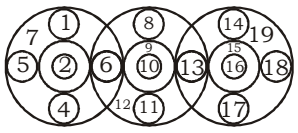


There are 17 circles.

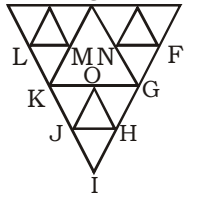
38. (c)



39. (b)



40. (d)



The triangles are:-

D ALB; D BLM; D BMC; D CND

D DNF; D DEF; D KLM; D GNF

D CKG; D KJO; D OJH; D OHG

D JHI; D KAC; D GCE; D IKG;

D IAE;

41. (a) The TRIANGLES ARE:

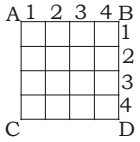
D ADE ; D DBG ; D DGH; D HDE

D HEF ; D EFC ; D HGF ; D DEG

D DGF ; D EFG ; D DEF ; D ECG

D DBF ; D ABC

42. (d)

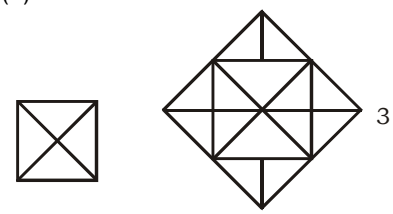


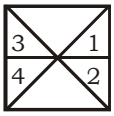
According to Formula

$4 \times 4 + 3 \times 3 + 2 \times 2 + 1 \times 1$

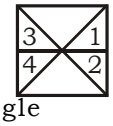
$= 16 + 9 + 4 + 1 =$ **30 squares**

43. (b)





= 8 Triangle

Then 

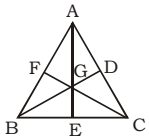
= 8 + 4 = 12 Triangle

$\times 4 = 3 \times 4 = 12$

Extra = 4

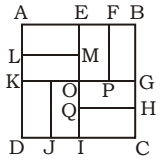
Total = 12 + 12 + 4 = **28 Triangle**

44. (a)



Triangle = D ABC, D ABE, D ACE, D ABD, D ACF, D ABD, D BCD, D AFG, D ADG, D BFG, D BEG, D CEG, D CDG, D ACG, D ABG, D BCG = **16**

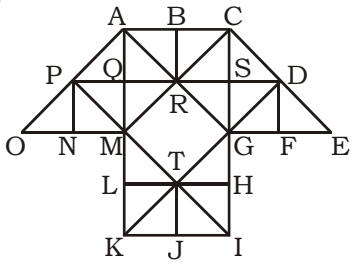
45. (c)



The rectangles, are : AEML, LMOK, AEOK, KNJD, NOIJ, KOID, AEID, LMID, EFPO, FBGP, EBGO, OGHQ, QHCI, OGCI, EBHQ, EBCI, AFPK, ABGK, NGCJ, KGCD, ABCD.

Thus, there are 21 rectangles.

46. (d)



The simplest triangles are:

D PNQ; D PNM ; D MPQ ; D MQR;

D MQR; D AQP; D AQP ; D AQR

D BRA ; D BRC ; D SRC ; D SCD

D DFG; D DFE ; D TLM ; D TJK

D TLK; D TIH;

The triangles composed of two components are:

D PON; D PMA ; D APR ; D RAM;

D RAC; D RAC; D RGC ; D DGC

D DGE; D MPR ; D GRD ; D DCR;

D TMK; D TKI; D TIG

The triangles composed of four components are:

D AMO; D AMC; D CAG; D CGE

D MKI; D GIK

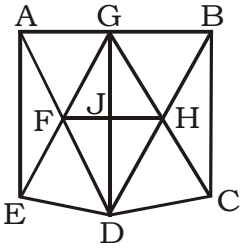
Other triangles are

D SPI ; D DQK, PDT

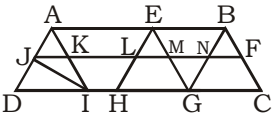
Total number of triangles

18 + 14 + 6 + 2 + 1 = 41

47. (a)

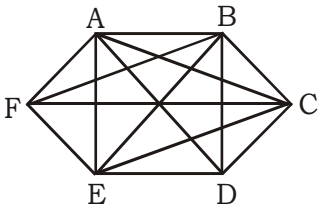


48. (d)



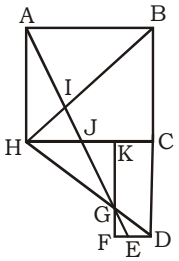
The triangles are : ADI, AJK, DIJ, IJK, EGH, ELM, GMN, GBE, BFN, BCG, JAI

49. (c)



The diagonals are : EC, AC, BE, BF, AD, CF, AE, BD.

50. (c)

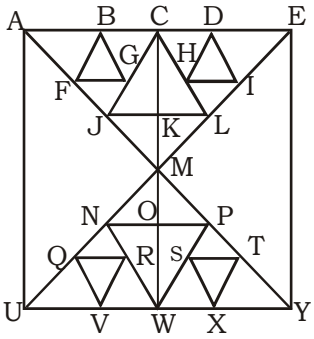


The triangles are :

D ABH, D BCH, D AHI, D HIJ, D AHJ, D ABI, D GHJ, D GHI, D GJK, D GHK, D DFG, D EFG, D CDH, D BDH, D DEG

Thus there are 15 triangles.

51. (d)



The triangles are:

D AFB ; D BFG; D GBC; D CKJ

D JGF; D KMJ; D JCM ; D ACJ

D ACM; D HCD ; D DIH ; D IDE

D CKL ; D LHI ; D LKM ; D LCM

D CLE ; D CME; D MON; D WON

D RVW; D QUV; D NRQ ; D NUW

D MNW; D MWU; D VRQ; D MOP

D OPQ ; D SWX ; D XTS ; D TXY

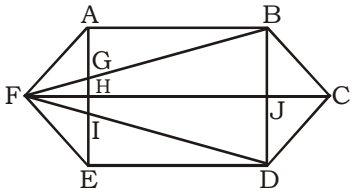
D PST ; D PMW; D PWY; D MWY

D CJL; D MAE; D MAU ; D MEY

D MUY; D WPN; D AEU; D EAY

D EYU ; D AUY ; D MLJ ; D MPN

52. (d)



The triangles are:

D AGF; D GHF; D FIH ; D FIE

D AFH; D AIF; D FEA; D FIG

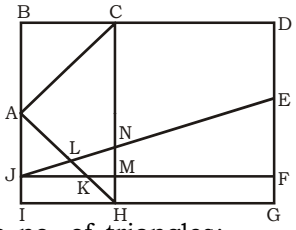
D FEG ; D FEH; D BAG ; D BJG

D CDJ ; D CBD; D DEI; D AFB

D DEF;D FJB; D FCB ; D FCD

D FJD; D FBD

53. (c)

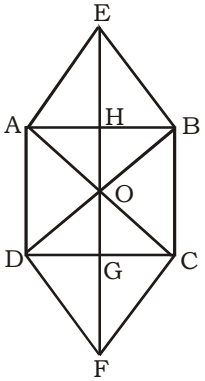


The no. of triangles:

ACH, ACB, AIH, AJK, KMH, ALJ, JLK, NJM, JEF, NHL

Thus, there are 10 triangles in this image.

54. (b)

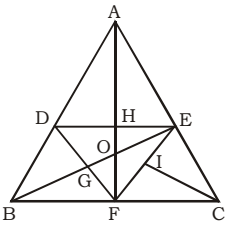


No. of triangles:

AOD, AOB, BOC, COD, ADC, BDC, ABC, ABD, AHO, BHO, DOG, GOC, AEH, EHB, AEB, DGF, CGF, DFC, AEO, BEO, FOD, FOC.

Thus, there are 22 triangles in this image.

55. (c)

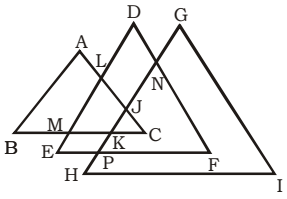


Triangles are:

ABC, ABF, AFC, DEF, DBF, EFC, DBG, GBF, ECI, ICF, BOF, BEF, BED, ABO, DGE, GFE, DHF, EHF, AOE, DAH, AHE, ADE, BEC, FOE, HOE, OGF, ADF, AEF.

There are 28 triangles in the given figure.

56. (c)

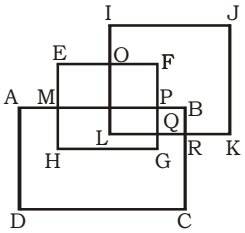


Triangles:

ABC, DEF, GHI, JKC, LMC, NPF

Thus, there are 6 triangles in given figure.

57. (c)

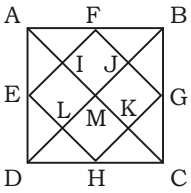


The rectangles are:

ABCD, EFGH, IJKL, EONM, OFPN, OJQL, NPQL, NBRL, PBRQ, MPGH, EFPM.

Thus, there are 11 rectangles in this figure.

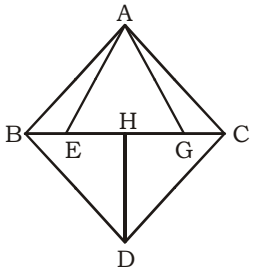
58. (a)



AMD, AMB, BMC, CMD, ADC, BDC, ADB, ACB, AIE, AIF, AEF, FJB, BJB, BFG, GKC, CKH, GHC, HDL, DEL, EDH.

Thus, total no. of triangles are 20.

59. (b)

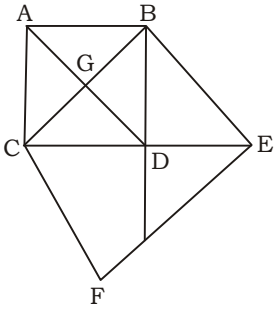


The triangles are:

ABE, ABG, ABC, AEG, AEC, AGC, BDC, BFD, CFD.

Thus, there are 9 triangles in the given figure.

60. (c)



The no. of triangles:

AGC, AGB, BGD, DGC, ACD, BDC, ACB, ADB, BDE, EDF, BFE, BCF, CDF, CFE, CBE.

Thus, there are 15 triangles in this figure.