

**1)**  $27 - 24 \div 3 + 1 = ?$

- A) 21      B) 20      C) 18      D) 10      E) 2

**2)**  $0,2 - 0,17 = ?$

- A) 0,3      B) -0,3      C) 0,03  
D) -0,03      E) -0,15

**3)**  $3x = 3^{2010} \Rightarrow x = ?$

- A)  $3^{2009}$       B)  $3^{670}$       C)  $1^{2010}$   
D)  $3^{1005}$       E) 2010

**4)**  $3x + 2010^2 = 2013^2 \Rightarrow x = ?$

- A) 1      B) 2010      C) 2013  
D) 4023      E)  $2010^2$

**5)**  $2(x+1) - 3(5-x) = 2 \Rightarrow x = ?$

- A) 6      B) 5      C) 4  
D) 3      E) 2

**6)**  $2 + \frac{3}{1 + \frac{1}{x}} = 4 \Rightarrow x = ?$

- A) 5      B) 4      C) 3      D) 2      E) 1

7)  $\frac{\sqrt{48} + \sqrt{108}}{\sqrt{12}} = ?$

- A) 5      B) 4      C)  $\sqrt{13}$   
D) 3      E) 2

8)  $\frac{2^{2010} + 2^{2010} + 2^{2010}}{3^{2010} + 3^{2010}} = ?$

- A)  $\left(\frac{2}{3}\right)^{2011}$   
B)  $\left(\frac{2}{3}\right)^{2010}$   
C)  $\left(\frac{2}{3}\right)^{2009}$   
D)  $\frac{2}{3}$

E) 1

9)  $\frac{1}{2} - \frac{1}{3} = ?$

- A)  $-\frac{1}{6}$       B)  $\frac{1}{5}$       C) 0      D) 1      E)  $\frac{1}{6}$

10)  $\frac{ab + 3a + 2b + 6}{a^2 - 4} = ?$

A)  $\frac{b-3}{a+2}$

B)  $\frac{b+3}{a+2}$

C)  $\frac{b-3}{a-2}$

D)  $\frac{b+3}{a-2}$

E) 1

11)  $x^2 + y^2 = 2xy \Rightarrow \frac{x}{y} = ?$

- A) 1      B) 2      C) 3      D) 4      E) 5

12)  $33333 = \frac{x-2}{3} \Rightarrow x = ?$

A)  $10^4 + 1$

B)  $10^5 + 1$

C)  $10^6 + 1$

D)  $10^5 - 1$

E)  $10^6 - 1$

13)  $A = \frac{1}{2} \cdot \frac{3}{4} \cdot \frac{5}{6} \dots \frac{99}{100}$  and

$B = \frac{2}{3} \cdot \frac{4}{5} \cdot \frac{6}{7} \dots \frac{100}{101} \Rightarrow A \cdot B = ?$

- A) 1      B)  $\frac{1}{101}$       C)  $\frac{2}{101}$   
D)  $\frac{101}{2}$       E) 101

14)  $\left( \frac{1}{x^2} + \frac{1}{y^2} + \frac{2}{xy} \right) \cdot \frac{xy}{x+y} = ?$

A)  $x+y$

B)  $\frac{xy}{x+y}$

C)  $\frac{x+y}{xy}$

D)  $xy$

E)  $\frac{1}{x+y}$

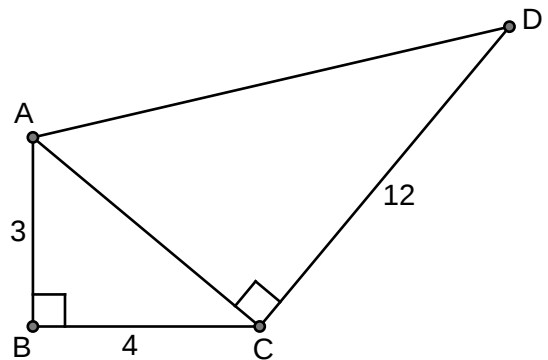
15)  $\begin{cases} 2a+b=7 \\ 3a-b=8 \end{cases} \Rightarrow a = ?$

- A) 3      B) 4      C) 5      D) 6      E) 7

16)  $\frac{a}{b} = \frac{9}{4}$  and  $\frac{b}{c} = \frac{5}{3} \Rightarrow \frac{a-b}{b-c} = ?$

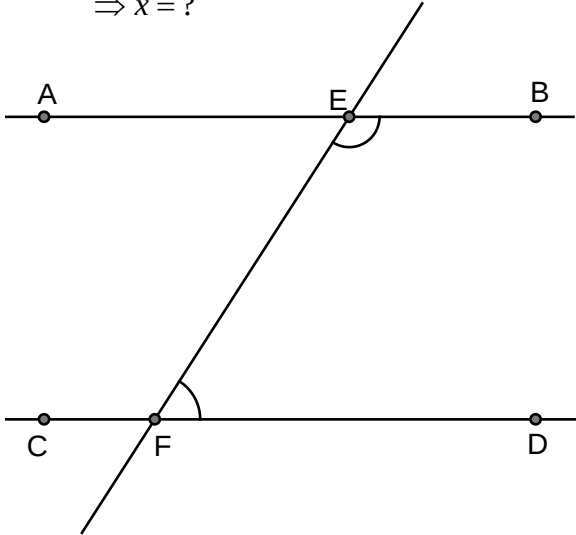
- A)  $\frac{5}{2}$       B)  $\frac{25}{8}$       C) 4      D)  $\frac{2}{5}$       E) 1

17)  $AB \perp BC$ ,  $AC \perp CD$ ,  $AB = 3$ ,  $BC = 4$ ,  
 $CD = 12$ .  $\Rightarrow AD = ?$



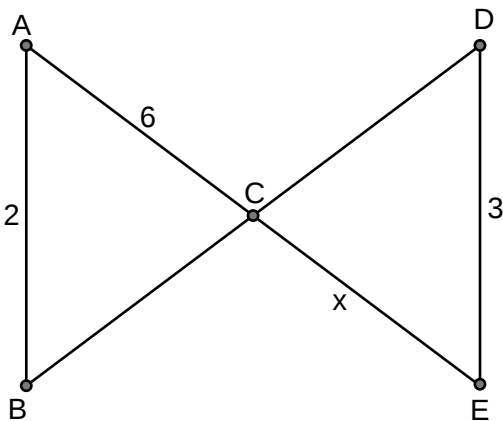
- A) 12      B) 13      C) 14      D) 15      E) 17

- 18)  $AB \parallel CD$ ,  $\angle FEB = 3x^\circ$ ,  $\angle EFD = 2x + 15^\circ$   
 $\Rightarrow x = ?$



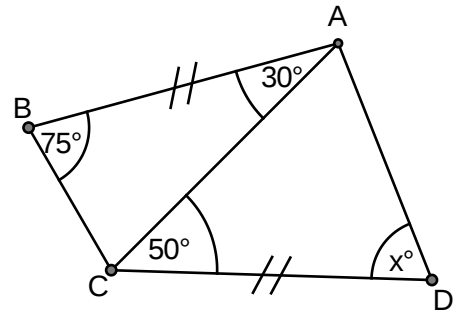
- A)  $15^\circ$  B)  $33^\circ$  C)  $44^\circ$  D)  $60^\circ$  E)  $70^\circ$

- 19)  $AB \parallel DE$ ,  $AB = 2$ ,  $AC = 6$ ,  $DE = 3$ ,  
 $\Rightarrow CE = x = ?$



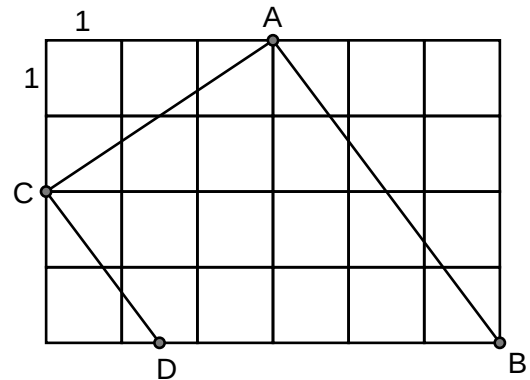
- A) 9 B) 8 C) 6 D) 4 E) 3

- 20)  $\angle BAC = 30^\circ$ ,  $\angle ABC = 75^\circ$ ,  $\angle ACD = 50^\circ$ ,  
 $AB = CD \Rightarrow \angle ADC = x = ?$



- A)  $30^\circ$  B)  $50^\circ$  C)  $55^\circ$  D)  $65^\circ$  E)  $70^\circ$

- 21)  $AB \parallel CD \Rightarrow CD = ?$

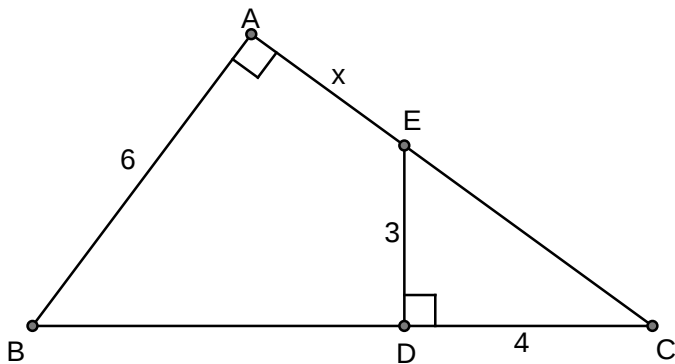


- A) 1,5 B) 2 C) 2,5 D) 3 E) 3,5

22)  $\frac{5}{1+3^{2010}} + \frac{5}{1+3^{-2010}} = ?$

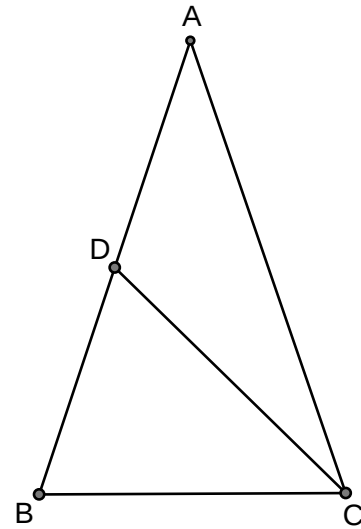
- A) 5      B) 4      C) 3      D) 2      E) 1

23)  $BA \perp AC, ED \perp DC, AB = 6, ED = 3, DC = 4. AE = x = ?$



- A) 3      B) 4      C) 5      D) 6      E) 7

24)  $AB = AC$  and  $AD = DC = BC.$   
 $\Rightarrow \angle BAC = ?$



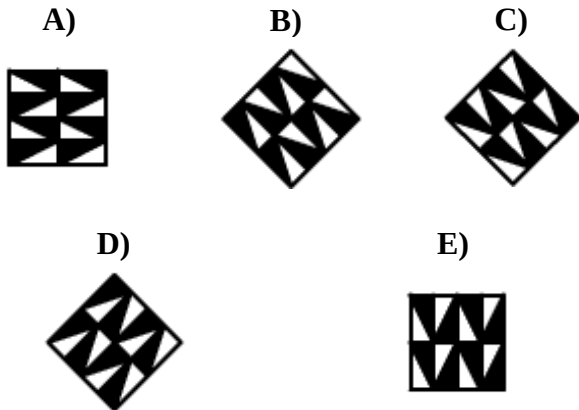
- A)  $30^\circ$       B)  $36^\circ$       C)  $40^\circ$   
 D)  $45^\circ$       E)  $50^\circ$

25)  $x - \sqrt{x} = 1 \Rightarrow x^2 + \frac{3}{x} = ?$

- A) 1      B) 3      C) 5      D) 8      E) 9

26)  $2 \Delta 1 \Rightarrow 1$   
 $4 \Delta 2 \Rightarrow 8$   
 $8 \Delta 4 \Rightarrow 64$   
 $5 \Delta 7 \Rightarrow ?$

- A) -8 B) 14 C) 21 D) -27 E) 15



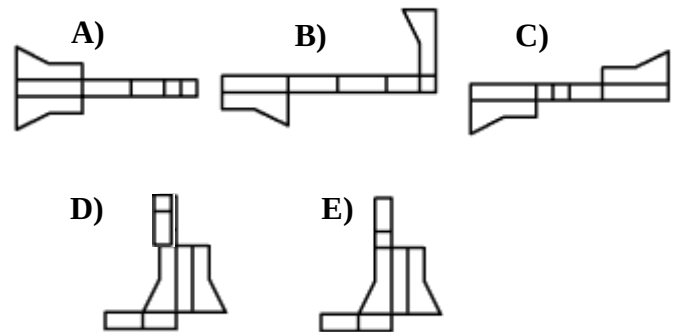
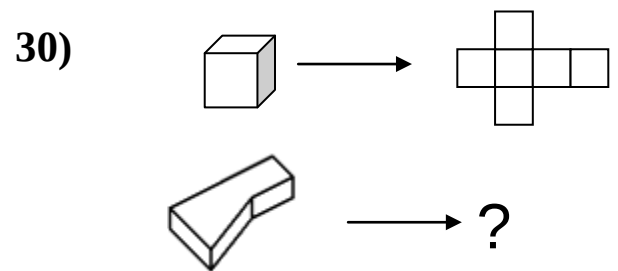
28) 1 1 2 3 5 8 13 21 34

- A) 45 B) 55 C) 60 D) 68 E) 72

29) 

|   |    |   |
|---|----|---|
| 2 | 16 | 5 |
| 3 | 21 | 6 |
| 5 | 23 | 4 |
| 1 | 7  | ? |

- A) 8 B) 6 C) 4 D) 2 E) 1

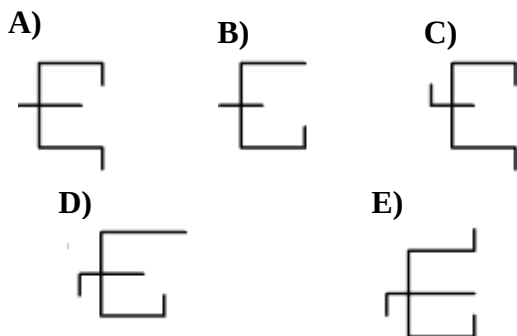
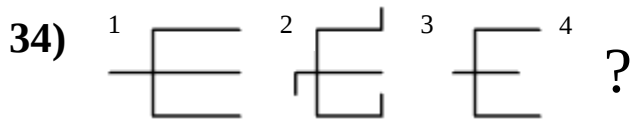
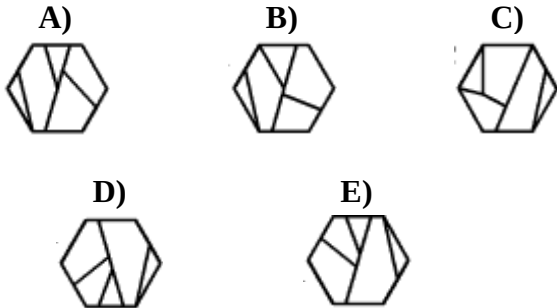


31)  $4 \oplus 5 = 29$   
 $6 \oplus 8 = 70$   
 $3 \oplus 6 = 39$   
 $5 \oplus 7 = ?$

- A) 25 B) 40 C) 49 D) 54 E) 62

- 32)  $4 \blacklozenge 5 \rightarrow 1;18$   
 $6 \blacklozenge 9 \rightarrow 3;30$   
 $2 \blacklozenge 3 \rightarrow 1;10$   
 $4 \blacklozenge 9 \rightarrow ?;?$

A) 5;24 B) 5;13 C) 13;36 D) 13;72 E) 5;26



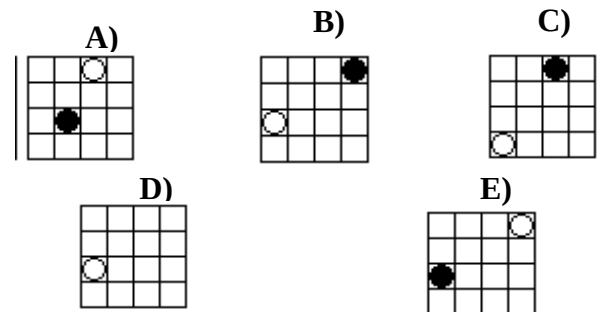
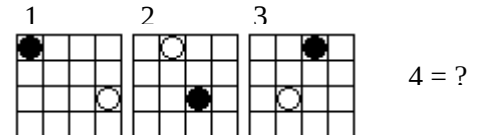
35)

$$\left. \begin{array}{l} \triangle \bigcirc \square \triangle \\ \bigcirc \triangle \bigcirc \square \\ \square \triangle \bigcirc \triangle \end{array} \right\} \triangle \bigcirc \triangle \square \left. \vphantom{\begin{array}{l} \triangle \bigcirc \square \triangle \\ \bigcirc \triangle \bigcirc \square \\ \square \triangle \bigcirc \triangle \end{array}} \right\} = \left\{ \begin{array}{ll} 4124 & 2414 \\ & 1412 \\ 1242 & 4142 \end{array} \right.$$

$$\bigcirc \triangle \bigcirc \square = ?$$

A) 4124 B) 1412 C) 2414  
D) 4142 E) 1242

36)

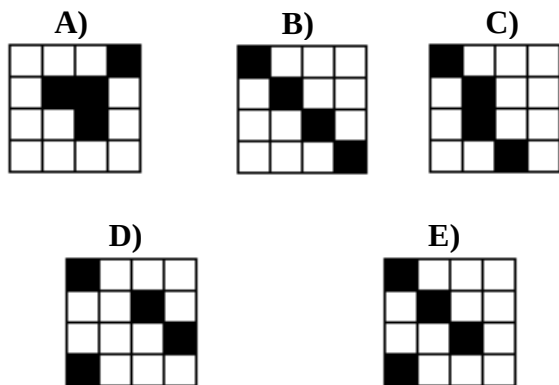
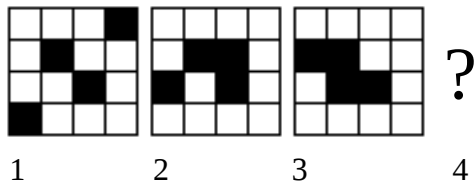


37)

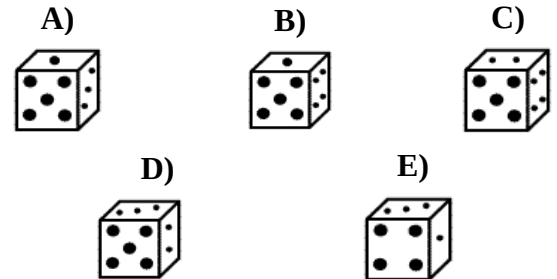
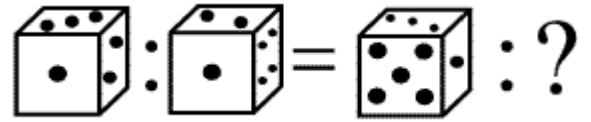
|   |    |    |
|---|----|----|
| 3 | 12 | 8  |
| 7 | 28 | 24 |
| 5 | 20 | ?  |

A) 22    B) 20    C) 18    D) 16    E) 14

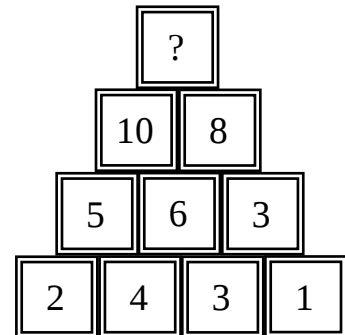
38)



39)

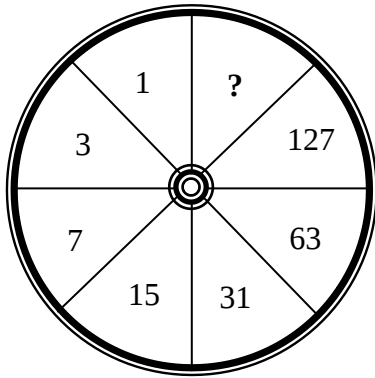


40)



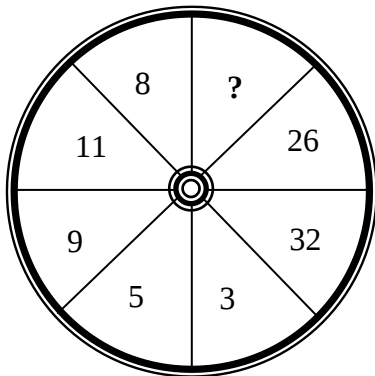
A) 8    B) 10    C) 12    D) 15    E) 17

41)



- A) 122    B) 144    C) 255    D) 366    E) 444

42)



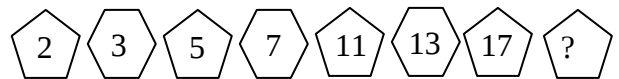
- A) 5    B) 14    C) 10    D) 15    E) 18

43)

- (I) 3,6,7,14,15,30  
(II) 5,10,9,18,17,34  
(III) 2,4,6,12,14,28  
(IV) ?

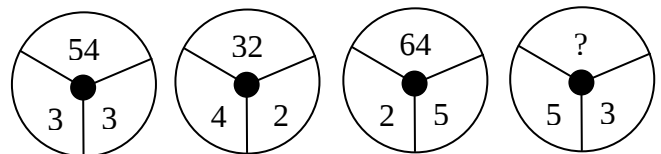
- A) 11,22,20,40,38,76  
B) 5,10,12,24,26,52  
C) 40,38,34,28,20,10  
D) 2,4,8,16,32,64  
E) 4,8,9,18,19,38

44)



- A) 19    B) 21    C) 23  
D) 25    E) 27

45)



- A) 30    B) 75    C) 125    D) 150    E) 250

46) Во која Европска екипа игра познатиот Македонски фудбалер Горан Пандев?

- A) Барселона
- B) Милан
- C) Интер
- D) Рома
- E) Бајерн

47) На кој датум се слави меѓународниот ден на трудот?

- A) 3 Мај
- B) 2 Мај
- C) 1 Мај
- D) 4 Мај
- E) 5 Мај

48) Кои две соседни држави на Македонија се членки на Европската Унија?

- A) Косово и Бугарија
- B) Србија и Албанија
- C) Албанија и Бугарија
- D) Албанија и Грција
- E) Грција и Бугарија

49) Кој од долунаведените е главен град на Европската Унија?

- A) Москва
- B) Вашингтон
- C) Пекинг
- D) Брисел
- E) Токио

50) Кое специфично животно живее во Австралија?

- A) Пингвин
- B) Поларна Мечка
- C) Лав
- D) Жирафа
- E) Кенгур

51) На кој континент се наоѓа Бразил?

- A) Јужна Америка
- B) Европа
- C) Азија
- D) Африка
- E) Австралија

46) Në cilën skuadër Evropiane luan fudbolisti i famshëm Maqedonas Goran Pandev?

- A) Barcelona
- B) Milan
- C) İnter
- D) Roma
- E) Bayern

47) Në cilën datë kremtohet Dita ndërkombëtare e punës?

- A) 3 Maj
- B) 2 Maj
- C) 1 Maj
- D) 4 Maj
- E) 5 Maj

48) Cilët dy shtete fqinje të Maqedonisë janë anëtare të Bashkimit Evropian?

- A) Kosova dhe Bullgaria
- B) Sërbia dhe Shqipëria
- C) Shqipëria dhe Bullgaria
- D) Shqipëria dhe Greqia
- E) Greqia dhe Bullgaria

49) Cili nga qytetet e mëposhtme është kryeqytet i Bashkimit Evropian?

- A) Moskva
- B) Vashingtoni
- C) Pekingu
- D) Brukseli
- E) Tokio

50) Cila kafshë specifike jeton në Australi?

- A) Pingueni
- B) Ariu Polar
- C) Luani
- D) Zhirafa
- E) Kenguri

51) Në cilën kontinent gjendet Brazili?

- A) Amerikën Jugore
- B) Evropë
- C) Azi
- D) Afrikë
- E) Australi

46) Ünlü Makedon futbolcu Goran Pandev hangi Avrupa takımında oynamaktadır?

- A) Barcelona
- B) Milan
- C) İnter
- D) Roma
- E) Bayern Münih

47) Uluslararası İşçi Bayramı hangi tarihte kutlanır?

- A) 3 Mayıs
- B) 2 Mayıs
- C) 1 Mayıs
- D) 4 Mayıs
- E) 5 Mayıs

48) Avrupa Birliği üyesi ve Makedonya'nın komşusu olan iki ülke aşağıdaki şıklardan hangisinde doğru olarak verilmiştir?

- A) Kosova ve Bulgaristan
- B) Sırbistan ve Arnavutluk
- C) Arnavutluk ve Bulgaristan
- D) Arnavutluk ve Yunanistan
- E) Yunanistan ve Bulgaristan

49) Avrupa Birliği'nin başkenti aşağıdakilerden hangisidir?

- A) Moskova
- B) Washington
- C) Pekin
- D) Brüksel
- E) Tokyo

50) Sadece Avustralya'da yaşayan hayvan aşağıdakilerden hangisidir?

- A) Penguen
- B) Kutup ayısı
- C) Aslan
- D) Zyrafa
- E) Kanguru

51) Brezilya hangi kıtada bulunmaktadır?

- A) Güney Amerika
- B) Avrupa
- C) Asya
- D) Afrika
- E) Avustralya

46) For which European team does the famous Macedonian footballer Goran Pandev play?

- A) Barcelona
- B) Milan
- C) Inter
- D) Roma
- E) Bayern

47) On which date do we celebrate the international Labour Day (day of the workers)?

- A) 3<sup>rd</sup> of May
- B) 2<sup>nd</sup> of May
- C) 1<sup>st</sup> of May
- D) 4<sup>th</sup> of May
- E) 5<sup>th</sup> of May

48) Which two of Macedonia's neighboring countries are members of the European Union?

- A) Kosovo and Bulgaria
- B) Serbia and Albania
- C) Albania and Bulgaria
- D) Albania and Greece
- E) Greece and Bulgaria

49) Which one of the following cities is the capital city of the European Union?

- A) Moscow
- B) Washington
- C) Beijing
- D) Brussels
- E) Tokyo

50) Which animal is native to Australia?

- A) Penguin
- B) Polar bear
- C) Lion
- D) Giraffe
- E) Kangaroo

51) On which continent is Brazil located?

- A) South America
- B) Europe
- C) Asia
- D) Africa
- E) Australia

52) Највисокиот правен акт на Државата е:

- A) Правилник
- B) Устав
- C) Закон
- D) Суд
- E) Судија

53) Со нападот на Германија врз која од долунаведените држави, на 1 Септември 1939 година започна Втората Светска Војна?

- A) Русија
- B) Франција
- C) Англија
- D) Чекословачка
- E) Полска

54) Во која група се сместени халогените елементи?

- A) III B
- B) IV B
- C) V B
- D) VI B
- E) VII B

55) Како се именуваат јоните со позитивен полнеж?

- A) Катјони
- B) Анјони
- C) Алкани
- D) Алкени
- E) Електрони

56) Која од долунаведените соединенија не е органска?

- A)  $\text{CH}_4$
- B)  $\text{C}_2\text{H}_6$
- C)  $\text{H}_2\text{SO}_4$
- D)  $\text{C}_2\text{H}_2$
- E)  $\text{C}_2\text{H}_4$

57) Зголемувањето на холестеролот е причина за појавување на која од долунаведените болести?

- A) Анемија
- B) Мигрена
- C) Сида
- D) Артериосклероза
- E) Забоболка

52) Cili është akti më i lartë juridik i shtetit?

- A) Rregullorja
- B) Kushtetuta
- C) Ligji
- D) Gjyqi
- E) Gjykatësi

53) Më 1 Shtator të vitit 1939, me sulmin e Gjermanisë, në cilën nga shtetet e mëposhtme, nisi Lufta e Dytë Botërore?

- A) Rusi
- B) Francë
- C) Angli
- D) Çekoslovaki
- E) Poloni

54) Në cilën grup gjenden elementet halogjene?

- A) III B
- B) IV B
- C) V B
- D) VI B
- E) VII B

55) Si quhen jonet me ngarkesë pozitive?

- A) Katjone
- B) Anjone
- C) Alkane
- D) Alkene
- E) Elektrone

56) Cili nga komponimet e mëposhtme nuk është komponim organik?

- A)  $\text{CH}_4$
- B)  $\text{C}_2\text{H}_6$
- C)  $\text{H}_2\text{SO}_4$
- D)  $\text{C}_2\text{H}_2$
- E)  $\text{C}_2\text{H}_4$

57) Për cilën nga sëmundjet e mëposhtme është shkaktare rritja e kolesterolit?

- A) Anemia
- B) Migrena
- C) AIDS - i
- D) Arterioskleroza
- E) Dhimbja e dhëmbit

52) Devletin en üst yasası hangisidir?

- A) Yönetmelik
- B) Anayasa
- C) Kanun
- D) Mahkeme
- E) Hakim

53) 1 Eylül 1939 yılında Almanya'nın hangi ülkeye saldırmasıyla İkinci Dünya Savaşı başlamıştır?

- A) Rusya
- B) Fransa
- C) İngiltere
- D) Çekoslovakya
- E) Polonya

54) Halojen elementler hangi grupta bulunurlar?

- A) III B
- B) IV B
- C) V B
- D) VI B
- E) VII B

55) Pozitif elektrikli iyonlara ne denir?

- A) Katyon
- B) Anyon
- C) Alkan
- D) Alken
- E) Elektron

56) Aşağıdakilerden hangisi organik bileşik değildir?

- A) CH<sub>4</sub>
- B) C<sub>2</sub>H<sub>6</sub>
- C) H<sub>2</sub>SO<sub>4</sub>
- D) C<sub>2</sub>H<sub>2</sub>
- E) C<sub>2</sub>H<sub>4</sub>

57) Kolesterol miktarı çoğalınca hangi hastalığa neden olur?

- A) Anemi
- B) Migren
- C) AIDS
- D) Arterioskleroz
- E) Diş ağrısı

52) The highest legal act of a country is called:

- A) Statute
- B) Constitution
- C) Law
- D) Court
- E) Judge

53) Which one of the following countries did Germany invade on the 1<sup>st</sup> of September 1939, thus starting the Second World War?

- A) Russia
- B) France
- C) England
- D) Czechoslovakia
- E) Poland

54) Which group do the halogen elements belong to?

- A) III B
- B) IV B
- C) V B
- D) VI B
- E) VII B

55) What do we call ions with a positive charge?

- A) cations
- B) anions
- C) alkanes
- D) alkenes
- E) electrons

56) Which one of the following compounds is not organic?

- A) CH<sub>4</sub>
- B) C<sub>2</sub>H<sub>6</sub>
- C) H<sub>2</sub>SO<sub>4</sub>
- D) C<sub>2</sub>H<sub>2</sub>
- E) C<sub>2</sub>H<sub>4</sub>

57) Which one of the following diseases can be caused by increased cholesterol?

- A) Anemia
- B) Migraine
- C) AIDS
- D) Arteriosclerosis
- E) Toothache

**58)** Кое од долунаведените апарати служи за мерење на интензитетот на електричната енергија?

- A) Волтметар
- B) Амперметар
- C) Термометар
- D) Динамометар
- E) Генератор

**59)** Кој физичар во 1887 година го решил проблемот на пренос на електричната енергија во далечина?

- A) Никола Тесла
- B) Алберт Ајнштајн
- C) Алберт Ками
- D) Исак Њутон
- E) Бенџамин Франклин

**60)** Која година се отвори првото приватно училиште во Македонија, Колеџот „Јахја Кемал“ ?

- A) 1993
- B) 1994
- C) 1995
- D) 1996
- E) 1997

**58)** Si quhet vegla për matjen e intensitetit të rrymës elektrike?

- A) Voltmetër
- B) Ampermetër
- C) Termometër
- D) Dinamometër
- E) Gjenerator

**59)** Cili fizikan në vitin 1887 e ka zgjidhur problemin e bartjes së rrymës elektrike në largësi?

- A) Nikolla Tesla
- B) Albert Ajnshtajni
- C) Albert Kamu
- D) Isak Njutni
- E) Benjamin Franklini

**60)** Në cilën vit është hapur Kolegji “Jahja Kemal”, shkolla e parë private në Maqedoni ?

- A) 1993
- B) 1994
- C) 1995
- D) 1996
- E) 1997

**58)** Elektrik akımını ölçen cihaz hangisidir?

- A) Voltmetre
- B) Ampermetre
- C) Termometre
- D) Dinamometre
- E) Jeneratör

**59)** Elektrik enerjisini uzaklara nakletme sorunu 1887 yılında, hangi fizikçi tarafından çözüldü?

- A) Nikola Tesla
- B) Albert Ajnştajn
- C) Albert Kamu
- D) Isak Newton
- E) Benjamin Franklin

**60)** Makedonyanın ilk özel okulu olan Yahya Kemal Koleji hangi yılda kuruldu?

- A) 1993
- B) 1994
- C) 1995
- D) 1996
- E) 1997

**58)** Which one of the following apparatuses is used to measure electric current?

- A) Voltmeter
- B) Ammeter
- C) Thermometer
- D) Dynamometer
- E) Generator

**59)** Which physicist in 1887 solved the problem of transmission of electric current at a distance?

- A) Nikola Tesla
- B) Albert Einstein
- C) Albert Camus
- D) Isaac Newton
- E) Benjamin Franklin

**60)** In which year was the first private school in Macedonia, Yahya Kemal College, opened?

- A) 1993
- B) 1994
- C) 1995
- D) 1996
- E) 1997

| SUBJECT | QUESTION | ANSWERS |
|---------|----------|---------|
| MAT     | 1        | B       |
| MAT     | 2        | C       |
| MAT     | 3        | A       |
| MAT     | 4        | D       |
| MAT     | 5        | D       |
| MAT     | 6        | D       |
| MAT     | 7        | A       |
| MAT     | 8        | C       |
| MAT     | 9        | E       |
| MAT     | 10       | D       |
| MAT     | 11       | A       |
| MAT     | 12       | B       |
| MAT     | 13       | B       |
| MAT     | 14       | C       |
| MAT     | 15       | A       |
| MAT     | 16       | B       |
| MAT     | 17       | B       |
| MAT     | 18       | B       |
| MAT     | 19       | A       |
| MAT     | 20       | D       |
| MAT     | 21       | C       |
| MAT     | 22       | A       |
| MAT     | 23       | A       |
| MAT     | 24       | B       |
| MAT     | 25       | D       |
| IQ      | 26       | A       |
| IQ      | 27       | D       |
| IQ      | 28       | B       |
| IQ      | 29       | D       |
| IQ      | 30       | C       |

| SUBJECT      | QUESTION | ANSWERS |
|--------------|----------|---------|
| IQ           | 31       | D       |
| IQ           | 32       | E       |
| IQ           | 33       | A       |
| IQ           | 34       | C       |
| IQ           | 35       | B       |
| IQ           | 36       | E       |
| IQ           | 37       | D       |
| IQ           | 38       | E       |
| IQ           | 39       | B       |
| IQ           | 40       | E       |
| IQ           | 41       | C       |
| IQ           | 42       | B       |
| IQ           | 43       | A       |
| IQ           | 44       | A       |
| IQ           | 45       | E       |
| GENKNOWLEDGE | 46       | C       |
| GENKNOWLEDGE | 47       | C       |
| GENKNOWLEDGE | 48       | E       |
| GENKNOWLEDGE | 49       | D       |
| GENKNOWLEDGE | 50       | E       |
| GENKNOWLEDGE | 51       | A       |
| GENKNOWLEDGE | 52       | B       |
| GENKNOWLEDGE | 53       | E       |
| GENKNOWLEDGE | 54       | E       |
| GENKNOWLEDGE | 55       | A       |
| GENKNOWLEDGE | 56       | C       |
| GENKNOWLEDGE | 57       | D       |
| GENKNOWLEDGE | 58       | B       |
| GENKNOWLEDGE | 59       | A       |
| GENKNOWLEDGE | 60       | D       |