موسسه متروپل سعادت آباد

سعادت آباد – بلوار دریا – روبروی خیابان صرافها – پلاک 54 – **واحد** 10

METROPOLSAADATABAD

METROPOLSAADATABAD

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METROPOLSAADATABAD

HARRAN ÜNİVERSİTESİ YÖS 2020-1 ÖRNEK MANTIK VE MATEMATİK SORULARIDIR

MANTIK

1.

$$3^{1} \oplus 2^{4} = 11$$
$$4^{2} \oplus 5^{3} = 25$$
$$6^{3} \oplus 8^{4} = \ ?$$

A) 49 B) 52 C) 55 D) 58 E) 60

2.

I. $a \triangle b = \dfrac{b-a}{b+a}$

II. $a * b = \dfrac{b}{a}$

III. $(4 \triangle 8) * (5 \triangle 10) = ?$

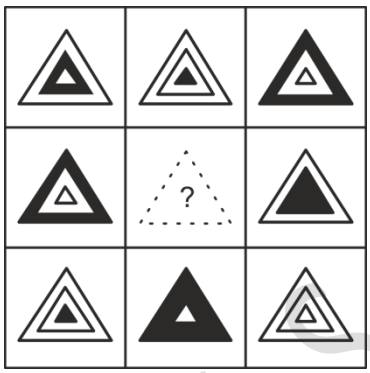
A) 2 B) 1 C) $\dfrac{2}{3}$ D) $\dfrac{1}{3}$ E) $\dfrac{3}{4}$

3.

1, 1, 3, 15, 105, ?

A) 630 B) 840 C) 945 D) 975 E) 1025

4.



A)  B)  C) 

D)  E) 

5.

$$\begin{array}{r} A\ B\ C \\ C\ A\ B \\ +\ B\ C\ A \\ \hline D\ D\ D \end{array} \qquad \begin{array}{r} D \\ \times\ D \\ \hline E \end{array} \qquad \Rightarrow A + B + C + D + E = ?$$

A) 8 B) 10 C) 12 D) 15 E) 24

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6.

LANSE
ASLAN
PENSE
SALEP
ABLAM
⇒ LANSE=?

A) 98694 B) 93692 C) 39617
D) 71231 E) 69231

7.

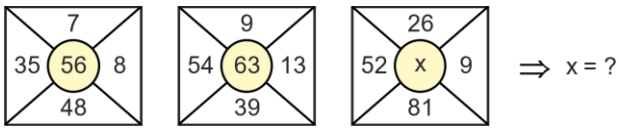
Bir evli çift evlilik yıl dönümlerini pasta keserek kutluyorlar ve kutladıkları her yıl kadar pastaya mum dikiyorlar. Bu yıla kadar toplam 136 mum diktiklerine göre bu yıl kaçıncı evlilik yıl dönümlerini kutluyorlardır?

يحتفل زوجين بعيد زواجهما فاذا كان الزوج في كل سنة يضع عدد من الشموع على حلوة الاحتفال تساوي رقم عيد زواجهما .
اذا كان مجموع عدد الشموع هو 136 ماهي السنة التي توافق عيد زواجهم؟

A couple celebrate their wedding anniversary by cutting a cake and they attach as much candles as the year they celebrate to the cake. If totally 136 candles are used up to this year, which anniversary are they celebrating this year?

A) 12 B) 13 C) 14 D) 15 E) 16

8.



A) 29 B) 30 C) 31 D) 32 E) 33

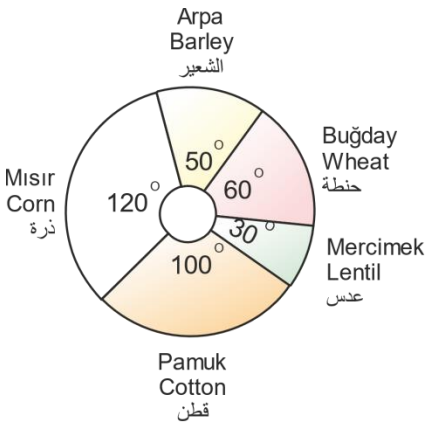
9. ve 10. Soruları aşağıdaki bilgilere göre cevaplayınız.

Türkiye'de 2019 yılında üretilen tarım ürünlerinin oransal dağılımı aşağıdaki dairesel grafikte verilmiştir.

الاسئلة (9-10) تكون اجابتها من المعلومات في الاسفل.
يعطي المخطط الدائري في الاسفل النسبة المئوية للمحصول الزراعي في تركيا خلال سنة 2019

Answer the questions 9st and 10nd according to the following information.

The proportional distribution of the agricultural products of Turkey in 2019 is given in the circular chart.



9.

2019 yılında Türkiye'de 180.000 ton buğday üretildiğine göre, aynı yıl kaç ton mercimek üretimi yapılmıştır?

في العام 2019 كان انتاج القمح في تركيا 180.000 طن.
في نفس السنة كم طن كان انتاج العدس ؟

If the wheat production of Turkey in 2019 is 180.000 tons, what is the lentil production of Turkey in 2019 ?

A) 150.000 B) 140.000 C) 120.000
D) 100.000 E) 90.000

10.

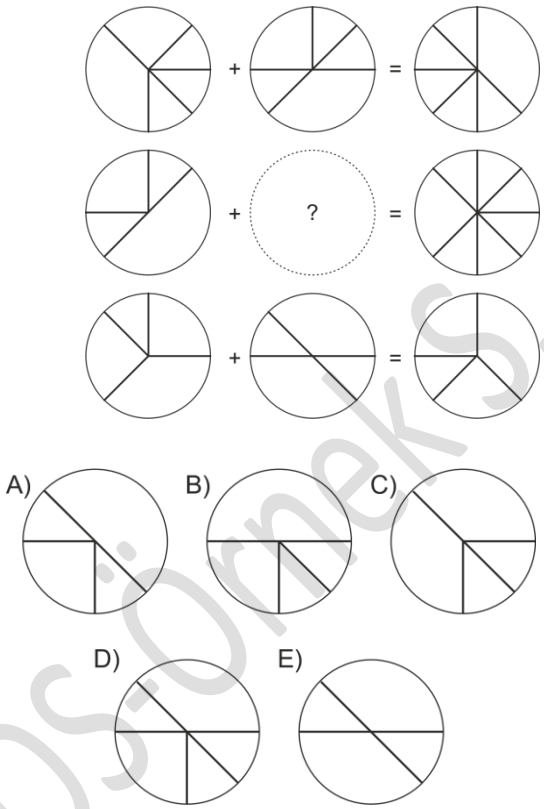
2019 yılında mısır üretimi pamuk üretiminden 296.000 ton fazla olduğuna göre, arpa üretimi kaç ton olur?

في سنة 2019 كان انتاج الذرة يزيد على انتاج القطن 296.000 طن بناء على ذلك كم طن كان انتاج الشعير؟

If the corn production is 296.000 tons more than the cotton production in 2019, what is the barley production in tons?

A) 740.000 B) 760.000 C) 820.000
D) 850.000 E) 900.000

11.



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12.

Bir doktor ile kızı, öğretmen ile hanımı bir yolculuğa çıkıyor. Yoldan üç elma alıyorlar ve her biri bir elma yiyor. Buna göre

I. Doktor, öğretmenin babasıdır.

II. Öğretmenin hanımı, doktorun kızıdır.

III. Öğretmen, doktorun damadıdır.

Hangileri kesinlikle doğrudur?

دكتور مع ابنته و معلم مع زوجته ذهبوا في رحلة وهم على الطريق اشتروا ثلاث تفاحات وكل واحد اكل تفاحة . بناء على ذلك اي من التالي هو صحيح تماما؟

I- الدكتور هو اب المعلم .

II- زوجة المعلم هي بنت الدكتور .

III- المعلم هو صهر الدكتور.

A doctor and his/her daughter, a teacher and his wife go on a journey. During the journey they buy three apples and each one eats one apple. Accordingly which one(s) of the following is(are) absolutely right?

I. The doctor is the father of the teacher

II. The wife of the teacher is the daughter of the doctor

III. The teacher is the son-in-law of the doctor

A) I-II-III B) I-II C) III

D) I E) II-III

13.

TAHTEREVALLİ	516532371448
ŞEKERLİK	?

Tabloya göre “?” yerine aşağıdaki hangi sayı gelmelidir?

بناء على الجدول ماهو العدد من التالي الذي يمكن وضعه مكان (?)؟

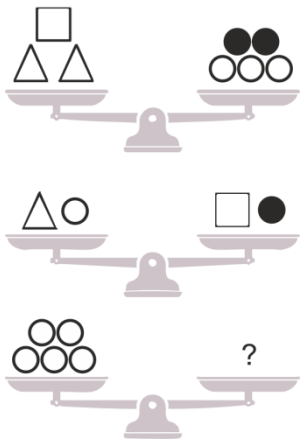
According to the table which number should come in place of “?” ?

A) 93032489 B) 93032480

C) 95052480 D) 910132489

E) 93037480

14.



A) 

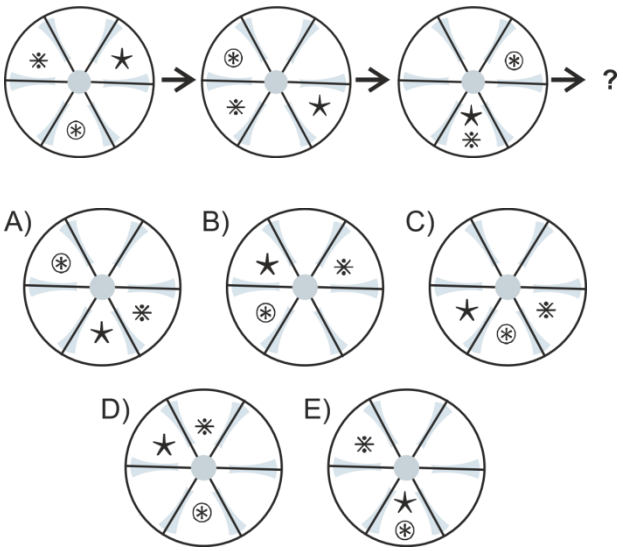
B) 

C) 

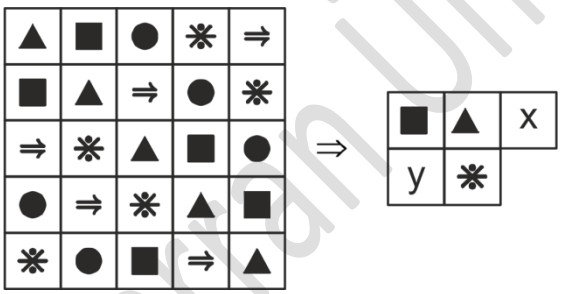
D) 

E) 

15.



16.



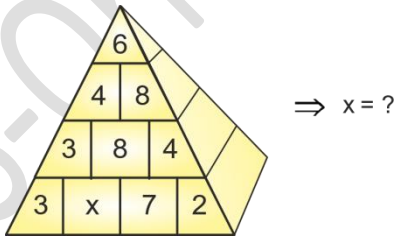
	x	y
A)	⇉	✱
B)	■	●
C)	⇉	⇉
D)	✱	✱
E)	✱	■

17.

846317, 36488, 46316, ? , 6311, 362, 38

A) 3647 B) 4717 C) 7463
D) 9364 E) 28346

18.



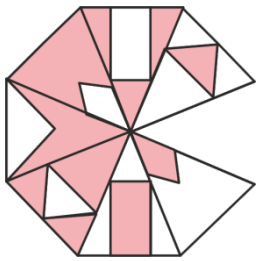
A) 4 B) 3 C) 2 D) 1 E) 0

19.

$$3 \blacktriangle 4 \blacksquare 6 = 2$$
$$63 \blacksquare 3 \blacktriangle 7 = 3$$
$$15 \blacktriangle 8 \blacksquare 4 = ?$$

A) 4 B) 18 C) 28 D) 30 E) 32

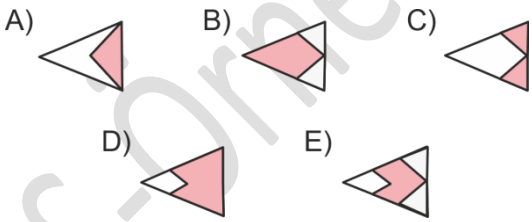
20.



Eksik parça aşağıdakilerden hangisidir?

أي مما يلي هو القطعة المفقودة؟

Which of the following is the missing piece?



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MATEMATİK

1.

$$f(2x-5)=g\left(\frac{3x-1}{2}\right)\Rightarrow$$

f ve *g* birer fonksiyon, $f^{-1}(x)$'in $g^{-1}(x)$ cinsinden eşiti aşağıdakilerden hangisidir?

$g^{-1}(x)$ دلالة $f^{-1}(x)$ اوجد قيمة. كل منهما تابع *g* و *f* اذا كان

f and *g* are functions, what is the equivalent of $f^{-1}(x)$ in terms of $g^{-1}(x)$?

A) $\frac{4}{3}g^{-1}(x)-11$

B) $\frac{4g^{-1}(x)-13}{3}$

C) $\frac{g^{-1}(x)+4}{11}$

D) $\frac{4g^{-1}(x)+3}{11}$

E) $3g^{-1}(x)+4$

2.

$$\frac{1}{\sqrt{2}-1}+\frac{1}{\sqrt{3}+\sqrt{2}}+\frac{1}{2+\sqrt{3}}=?$$

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

3.

$$x=0{,}0005\overline{4}\ \Rightarrow\ \sqrt{x}=?$$

A) $0{,}02\overline{7}$ B) $0{,}002\overline{6}$ C) $0{,}02\overline{5}$

D) $0{,}002\overline{4}$ E) $0{,}02\overline{3}$

4.

$$1-\frac{2}{3-\frac{4}{5-\frac{6}{7}}}=?$$

A) $\frac{48}{105}$ B) $\frac{4}{5}$ C) $\frac{1}{59}$ D) $\frac{47}{61}$ E) $\frac{2}{37}$

5.

Bir $\triangle ABC$ üçgenin çevresi 60 cm ve $5\,Sin\hat{A} = Sin\hat{B} + Sin\hat{C}$ ise $|AB|+|AC|$ kaç santimetredir?

في المثلث $\triangle ABC$ لدينا المحيط يساوي (60) ولدينا العلاقة : $5\,Sin\hat{A} = Sin\hat{B} + Sin\hat{C}$ احسب $|AB|+|AC|$

The perimeter of a triagle $\triangle ABC$ is 60 cm. if $5\,Sin\hat{A} = Sin\hat{B} + Sin\hat{C}$, then what is the length $|AB|+|AC|$ in cm ?

A) 52 B) 50 C) 42 D) 40 E) 38

6.

$AB \perp AC$, $CD \perp AC$ ve $\overset{\frown}{BC}$ yayı, bir yarım çember $|AB|=|CD|=190$, $|AC|=80$ cm. Metrekaresi 500 lira olan bir malzemeden şekildeki gibi bir parçanın maliyeti kaç liradır? ($\pi=3$ alınız)

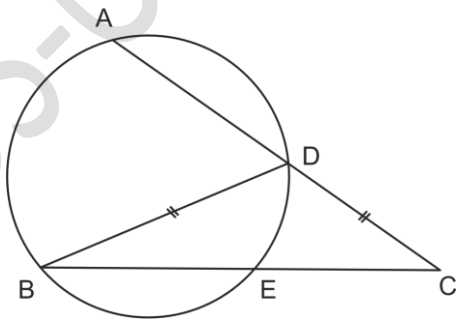
اذا كان $AB \perp AC$, $CD \perp AC$ وكان القوس $\overset{\frown}{BC}$ هو نصف دائرة وكان $|AB|=|CD|=190$, $|AC|=80cm$

ماهو سعر المادة المعدنية في الشكل اذا كان سعر المتر المربع الواحد يساوي 500 ليرة ؟ ($\pi=3$)

$AB \perp AC$, $CD \perp AC$ and the arc $\overset{\frown}{BC}$ is a half circle. $|AB|=|CD|=190$, $|AC|=80$ cm. What is the cost of the material in the figure, if the price for a square meter is 500 TL? ($\pi=3$)

A) 640 B) 680 C) 700 D) 720 E) 750

7.



$|CD|=|BD|=8$, $m(\hat{C})=30^\circ$ $\Rightarrow$ $|BE|=?$

A) $4\sqrt{3}$ B) $5\sqrt{3}$ C) $\frac{16\sqrt{3}}{3}$ D) $3\sqrt{3}$ E) $\frac{8\sqrt{3}}{3}$

8.

$$\frac{\cos 2x}{\sin 2x} - \frac{\sin 2x}{\cos 2x} = 2$$

Yukarıdaki denklemin $\left[0, \frac{\pi}{2}\right]$ aralığındaki kökü kaçtır?

ما هو حل المعادلة السابقة على المجال $\left[0, \frac{\pi}{2}\right]$

What is the root of the above equation in the interval $\left[0, \frac{\pi}{2}\right]$?

A) $\frac{\pi}{8}$ B) $\frac{5\pi}{12}$ C) $\frac{\pi}{16}$ D) $\frac{7\pi}{16}$ E) $\frac{\pi}{12}$

9.

$$A - B = \begin{bmatrix} -9 & -3 \\ 2 & -5 \end{bmatrix},\ 2A + B = \begin{bmatrix} 3 & 12 \\ 13 & 2 \end{bmatrix} \Rightarrow A = ?$$

A) $\begin{bmatrix} -2 & 3 \\ 5 & -1 \end{bmatrix}$ B) $\begin{bmatrix} -2 & 3 \\ 3 & 4 \end{bmatrix}$ C) $\begin{bmatrix} 5 & 3 \\ 8 & -1 \end{bmatrix}$

D) $\begin{bmatrix} -2 & 3 \\ 5 & 5 \end{bmatrix}$ E) $\begin{bmatrix} -2 & 9 \\ 5 & -1 \end{bmatrix}$

10.

$$\frac{1}{\left(\frac{1}{16}\right)^{3/2}} - \frac{1}{\left(\frac{1}{4}\right)^{5/2}} = ?$$

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

11.

$$-2\cos^2 x + 7\sin x - 2 = 0$$

Denkleminin $\left[\frac{\pi}{2}, \frac{3\pi}{2}\right]$ aralığındaki kökü kaçtır?

اوجد حلول المعادلة في الاعلى على المجال $\left[\frac{\pi}{2}, \frac{3\pi}{2}\right]$

What is the root of the above equation in the interval $\left[\frac{\pi}{2}, \frac{3\pi}{2}\right]$?

A) $\frac{5\pi}{6}$ B) $\frac{2\pi}{3}$ C) $\frac{3\pi}{4}$ D) π E) $\frac{7\pi}{6}$

12.

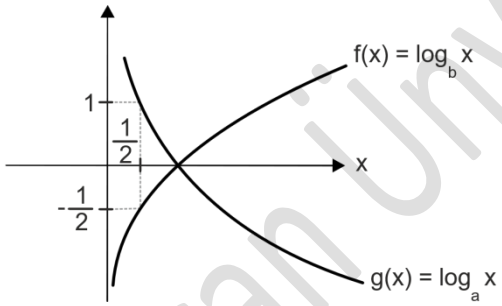
n pozitif tam sayısı 8 ile bölündüğünde kalan 2 ise n+10 sayısı 8 ile bölündüğünde kalan kaçtır?

لدينا (n) عدد صحيح موجب باقي قسمته على 8 هو 2 . ماهو باقي قسمة (n+10) على 8

If the positive integer n leaves a remainder of 2 when divided by 8, what will the remainder be when n+10 is divided by 8 ?

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

13.



Şekilde f ve g fonksiyonlarının grafikleri verilmiştir. Buna göre (f – g) (x) =?

في الشكل يعطى الرسم البياني للتوابع (f) و (g) بناء على ذلك (f – g) (x) =?

The graphs of the functions *f* and *g* are given in the figure. Accordingly, which one of the following is the function (f – g) (x) =?

A) $2\log_4 x$ B) $\frac{3}{2}\log_4 x$ C) $\log_8 x$

D) $\frac{3}{2}\log_2 x$ E) $\log_2 x$

14.

$$a = \sqrt{18} + \sqrt{48}$$
$$b = \sqrt{32} + \sqrt{27}$$
$$c = \sqrt{8} + \sqrt{75}$$

ise aşağıdaki ifadelerden hangisi doğrudur?

أي من التالي هو الترتيب الصحيح :

According to above equations which one of the following is true ?

A) a<b<c B) a<c<b

C) b<a<c D) b<c<a

E) c<a<b

15.

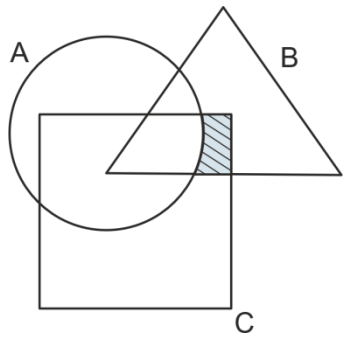
2020^{2020} sayısının 9 a bölümünden kalan kaçtır?

ماهو باقي قسمة 2020^{2020} على العدد تسعة

What is the remainder when the number 2020^{2020} is divided by 9 ?

A) 1 B) 3 C) 4 D) 5 E) 7

16.



I) $(B \cap C)-A$
II) $(B-A) \cap C$
III) $(B \cup C)-A$

ifadelerinden hangileri şekildeki taralı kümeyi ifade eder?

أي من العبارات السابقة هي التي تشير للمساحة المضللة في الشكل

Which one(s) of the above expressions describe(s) the shaded set?

A) Yalnız I B) I ve II C) I ve III
D) II ve III E) I, II ve III

17.

$$f(x)=\frac{\tan^{\sqrt{3}/2} x}{1+\tan^{\sqrt{3}} x}$$

$f(\frac{\pi}{2}-x)$ fonksiyonunun f(x) cinsinden eşiti aşağıdakilerden hangisidir?

اوجد قيمة التابع $f(\frac{\pi}{2}-x)$ بدلالة f(x)

Which one of the following is the equivalent of the function $f(\frac{\pi}{2}-x)$ in terms of f(x)?

A) f(x) B) f(x)+1 C) $\frac{f(x)}{f(x)+1}$
D) 2.f(x) E) $\frac{1}{f(x)}$

18.

$z+8=\ |z|^2-\bar{z}$ eşitliğini sağlayan z = x + iy karmaşık sayılarının geometrik yeri aşağıdakilerden hangisidir?

$z+8=\ |z|^2-\bar{z}$?

ليكن العدد المركب z = x + iy أي من المعادلات التالية هي تعطي التمثيل للعدد المركب $z+8=\ |z|^2-\bar{z}$

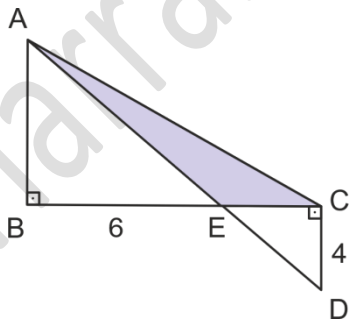
Which one of the following is the locus of the complex numbers z = x + iy satisfying the equality $z+8=\ |z|^2-\bar{z}$?

A) $(x-1)^2+y^2=8$ B) $x^2+(y+1)^2=9$

C) $(x-1)^2+y^2=9$ D) $x^2+y^2=8$

E) $(x-1)^2+(y+1)^2=9$

19.



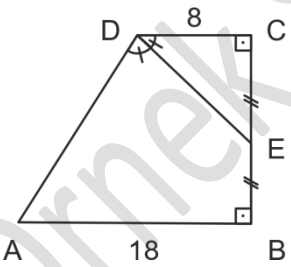
ABC ve ECD dik üçgen ve |BE|=6 cm, |CD|=4 cm olduğuna göre AEC üçgeninin alanı kaç cm^2'dir?

ليكن المثلثان القائمان (ABC) و(ECD) لدينا (|BE|=6) و (|CD|=4) بناء على ذلك احسب مساحة المثلث (AEC)

ABC and ECD are right angled triangles. If |BE|=6 cm, |CD|=4 cm. What is the area of the triangle AEC in cm^2?

A) 12 B) 14 C) 16 D) 18 E) 20

20.



ABCD dik yamuk |AB|=18 , |CD|=8

|DE| açıortay $|CE|=|EB| \Rightarrow |EB|=?$

ليكن (ABCD) شبه منحرف قائم فيه |AB|=18, |CD|=8 و [DE] منصف |CE|=|EB| اوجد : |EB|=?

ABCD is a right trapezoid |AB|=18 , |CD|=8 [DE] is the bisector of $\hat{ADC}$ $|CE|=|EB| \Rightarrow |EB|=?$

A) 6 B) 8 C) 10 D) 12 E) 14