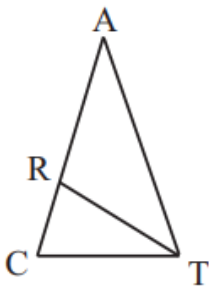
1 / 10

2000 Q13

13. In triangle CAT, we have $\angle ACT = \angle ATC$ and $\angle CAT = 36°$. If $\overline{TR}$ bisects $\angle ATC$, then $\angle CRT =$

(A) 16° **(B)** 51° **(C)** 72° **(D)** 90° **(E)** 108°

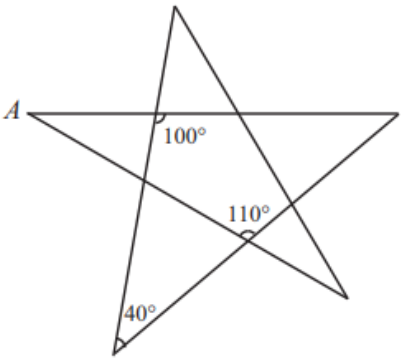


2 / 10

1999 Q21

21. The degree measure of angle A is

(A) 20 **(B)** 30 **(C)** 35 **(D)** 40 **(E)** 45

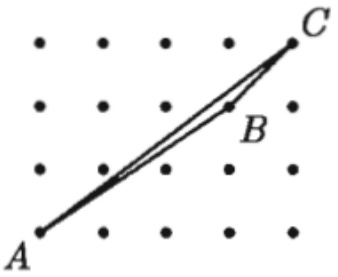


3 / 10

1996 Q22

22. The horizontal and vertical distances between adjacent points equal 1 unit. The area of triangle ABC is

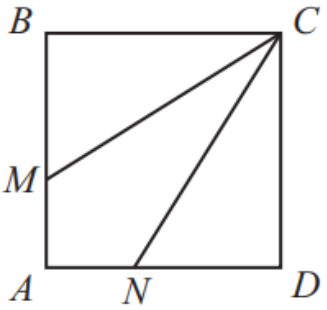
(A) 1/4 **(B)** 1/2 **(C)** 3/4
(D) 1 **(E)** 5/4



4 / 10

1999 Q23

23. Square $ABCD$ has sides of length 3. Segments CM and CN divide the square's area into three equal part. How long is segment CM?



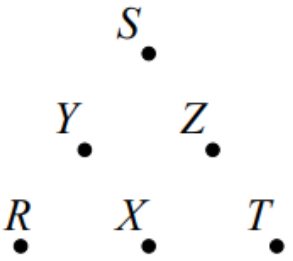
(A) $\sqrt{10}$ **(B)** $\sqrt{12}$ **(C)** $\sqrt{13}$

(D) $\sqrt{14}$ **(E)** $\sqrt{15}$

5 / 10

2001 Q23

23. Points R, S and T are vertices of an equilateral triangle, and points X, Y and Z are midpoints of its sides. How many noncongruent triangles can be drawn using any three of these six points as vertices?

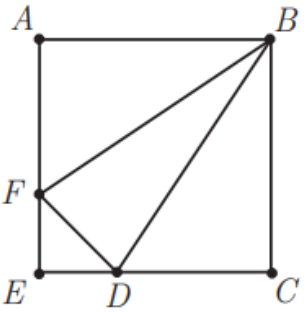


(A) 1 (B) 2 (C) 3 (D) 4 (E) 20

6 / 10

2008 Q23

23. In square $ABCE$, $AF = 2FE$ and $CD = 2DE$. What is the ratio of the area of $\triangle BFD$ to the area of square $ABCE$?



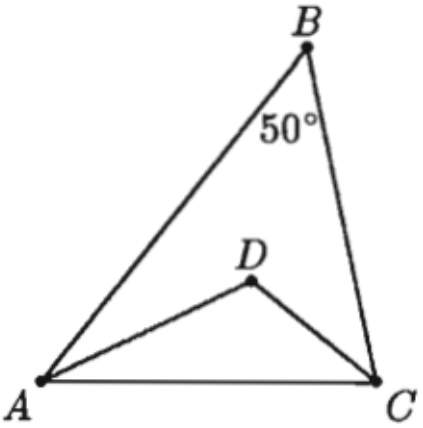
(A) $\frac{1}{6}$ **(B)** $\frac{2}{9}$ **(C)** $\frac{5}{18}$ **(D)** $\frac{1}{3}$ **(E)** $\frac{7}{20}$

7 / 10

1996 Q24

24. The measure of angle ABC is $50°$, $\overline{AD}$ bisects angle BAC, and $\overline{DC}$ bisects angle BCA. The measure of angle ADC is

(A) $90°$ **(B)** $100°$ **(C)** $115°$ **(D)** $122.5°$ **(E)** $125°$

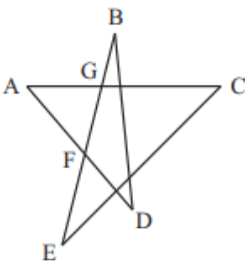


8 / 10

2000 Q24

24. If $\angle A = 20°$ and $\angle AFG = \angle AGF$, Then $\angle B + \angle D =$

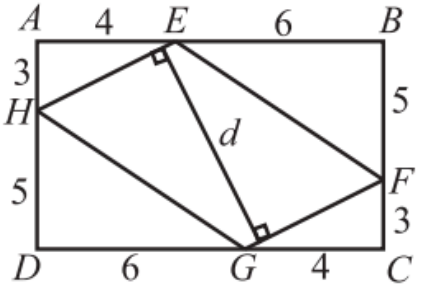
(A) $48°$ **(B)** $60°$ **(C)** $72°$ **(D)** $80°$ **(E)** $90°$



9 / 10

2004 Q24

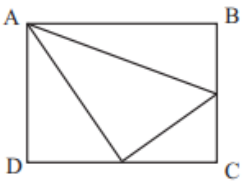
24. In the figure, $ABCD$ is a rectangle and $EFGH$ is a parallelogram. Using the measurements given in the figure, what is the length d of the segment that is perpendicular to $\overline{HE}$ and $\overline{FG}$?



(A) 6.8 **(B)** 7.1 **(C)** 7.6 **(D)** 7.8 **(E)** 8.1

2000 Q25

25. The area of rectangle $ABCD$ is 72. If point A and the midpoints of $\overline{BC}$ and $\overline{CD}$ are joined to form a triangle, the area of that triangle is



(A) 21 **(B)** 27 **(C)** 30 **(D)** 36 **(E)** 40