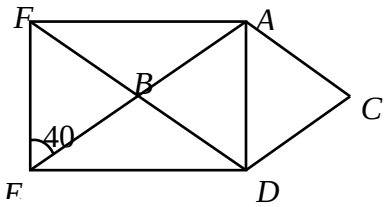
TB(3A) Ch. 5 Quadrilaterals

Multiple Choice Questions

1. [14-15 Mid-year Exam Q9]

In the figure, *FEDA* is a rectangle. *AE* meets *FD* at *B* and *ACDB* is a rhombus. Find $\angle ACD$.

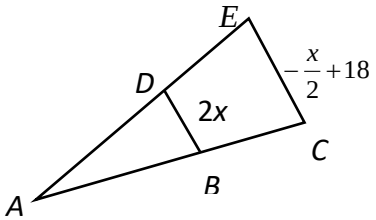


A. 40^o **B.** 50^o

C. 80^o **D.** 100^o

2. [14-15 Mid-year Exam Q10]

In the figure, *B* is the mid-point of *AC* and *D* is the mid-point of *AE*. Find the value of *x*.



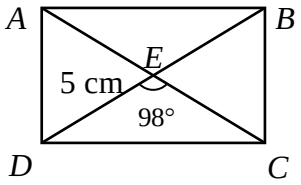
A. 4 **B.** 7.2

C. 8.4 **D.** 12

3. [14-15 Mid-year Exam Q17]

In the figure, *ABCD* is a rectangle. Find the area of ΔDCE.

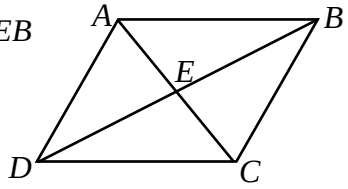
A. 6.2 cm^2
B. 12.4 cm^2
C. 24.8 cm^2
D. 49.6 cm^2



4. [14-15 Mid-year Exam Q18]

In the figure, *ABCD* is a parallelogram and *AD* = *AB*. Which of the following must be true?

I. *AE* = *EC*
II. $\angle AED = \angle AEB$
III. *DC* = *BC*

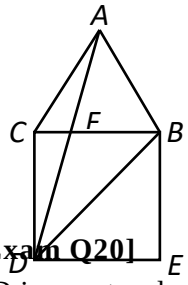


A. I only
B. I and II only
C. II and III only
D. All of the above

5. [14-15 Mid-year Exam Q19]

In the figure, *ABC* is an equilateral triangle and *CDEB* is a square. Find $\angle BFD$.

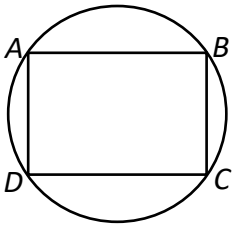
A. 45^o
B. 75^o
C. 105^o
D. 120^o



6. [14-15 Mid-year Exam Q20]

In the figure, *ABCD* is a rectangle and is inscribed in a circle. If *AB* : *AD* = 3:1, find the ratio of the area of the rectangle to the area of the circle.

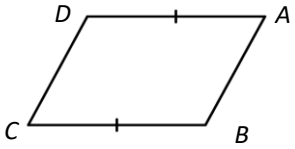
A. 1 : 9
B. 3 : 5π
C. 6 : 5π
D. 3 : 10



7. [14-15 Final Exam Q7]

In the figure, *AD* = *BC*. Which of the following are sufficient conditions to make *ABCD* a parallelogram?

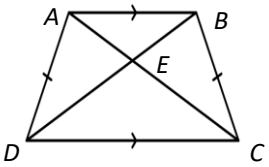
I. *AB* = *CD*
II. *AD* // *BC*
III. *AB* // *CD*



A. I and II only **B.** I and III only
C. II and III only **D.** I, II and III

8. [14-15 Final Exam Q18]

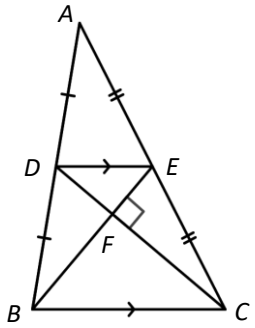
In the figure, *ABCD* is an isosceles trapezium. Which of the following MAY NOT be true?



A. $\Delta ABE \sim \Delta CDE$
B. $\Delta ABD \cong \Delta BAC$
C. $\frac{AE}{AC} = \frac{BD}{BE}$
D. $\frac{AB}{CD} = \frac{AE}{CE}$

9. [14-15 Final Exam Q30]

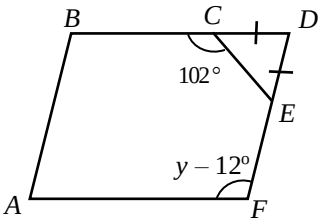
In the figure, *D* and *E* are mid points of *AB* and *AC* respectively. If the area of ΔDEF is 1, find the area of $BCED$.



A. 6
B. 8
C. 9
D. 12

10. [15-16 Mid-year Exam Q9]

In the figure, *ABDF* is a parallelogram. If *CD* = *DE*, find *y*.



A. 129°
B. 154.5°
C. 156°
D. 168°

11. [15-16 Mid-year Exam Q12]

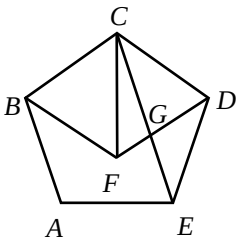
Which of the following must be true?

I. A square is a kite.
II. A parallelogram is a rhombus.
III. A trapezium has one pair of equal sides.
IV. The diagonals of a kite bisect each other.

A. I only
B. II only
C. I and II only
D. II, III and IV only

12. [15-16 Mid-year Exam Q17]

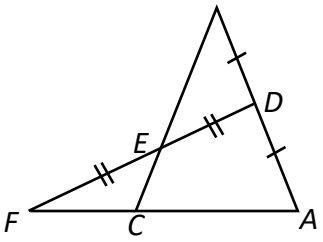
In the figure, *ABCDE* is a regular pentagon and *CBFD* is a rhombus. Find $\angle FCG$.



A. 18°
B. 27°
C. 36°
D. 40°

13. [15-16 Mid-year Exam Q20]

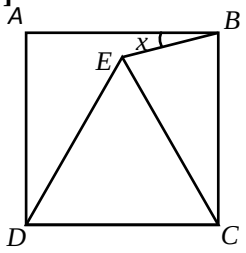
In the figure, *BD* = *DA* and *DE* = *EF*. Find *AC* : *FC*.



A. 1 : 1
B. 1 : 2
C. 2 : 1
D. 3 : 1

14. [15-16 Final Exam Q14]

In the figure, *ABCD* is a square and ΔCDE is an equilateral triangle. Find *x*.

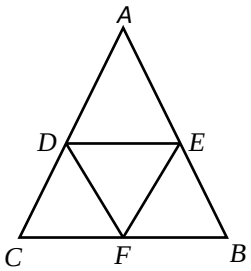


A. 10° **B.** 15°
C. 30° **D.** 60°

15. [15-16 Final Exam Q15]

In the figure, *D*, *E* and *F* are the points on *AC*, *AB* and *BC* respectively. If *CDEF* is a parallelogram, which of the following must be true?

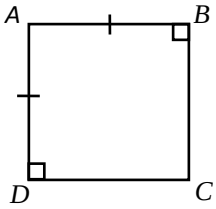
I. *CD* = *EF*
II. *ADFE* is a rhombus.
III. *DEBF* is a parallelogram.



A. I only
B. II only
C. III only
D. I, II and III

16. [15-16 Final Exam Q21]

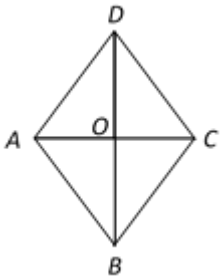
In a quadrilateral *ABCD*, $\angle B = \angle D = 90°$ and *AB* = *AD*. Which of the following must be true?



A. *ABCD* is a square.
B. *ABCD* is a parallelogram.
C. *ABCD* is a rhombus.
D. *ABCD* is a kite.

17. [16-17 Mid-year Exam Q9]

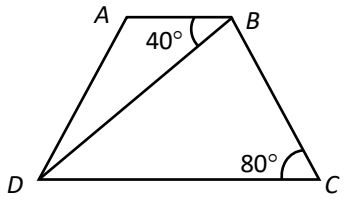
In the figure, *ABCD* is a rhombus, where *OA* = 3 cm and *OD* = 4 cm. Find the area of *ABCD*.



A. 12 cm^2
B. 24 cm^2
C. 36 cm^2
D. 48 cm^2

18. [16-17 Mid-year Exam Q18]

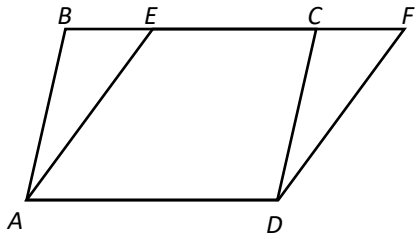
In the figure, *ABCD* is an isosceles trapezium. Which of the following may not be correct?



A. $\angle ADC = 2\angle ABD$
B. $AB = AD$
C. $CD = 2AB$
D. BD is an angle bisector of $\angle ADC$

19. [16-17 Mid-year Exam Q20]

In the figure, *ABCD* and *AEFD* are parallelograms. Which of the following are correct?

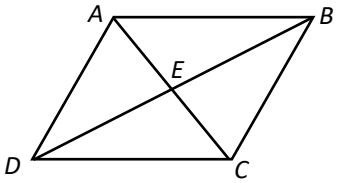


I. $\angle ADC = \angle DCF$
II. $\Delta ABE \cong \Delta DCF$
III. $\angle ADF = \angle ABE + \angle BAE$

A. I and II only
B. I and III only
C. II and III only
D. I, II and III

20. [16-17 Final Exam Q24]

In the figure, *ABCD* is a parallelogram and $\angle ADB = \angle ABD$. *AC* and *BD* intersect at *E*. Which of the following must be true?

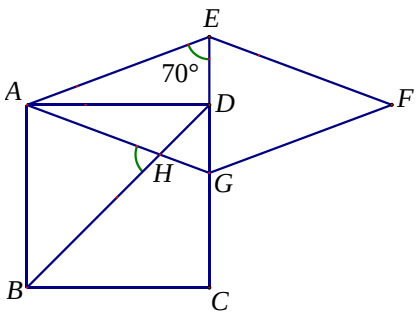


I. $AC \perp BD$
II. $\angle CAD = \angle ACD$
III. $AE \times EB = CE \times ED$

A. I only
B. I and II only
C. II and III only
D. I, II and III

21. [17-18 Mid-year Exam Q9]

In the figure, *ABCD* is a square and *AEFG* is a rhombus. *CGDE* is a straight line. If $\angle AED = 70°$, then $\angle AHB =$



A. 65°.

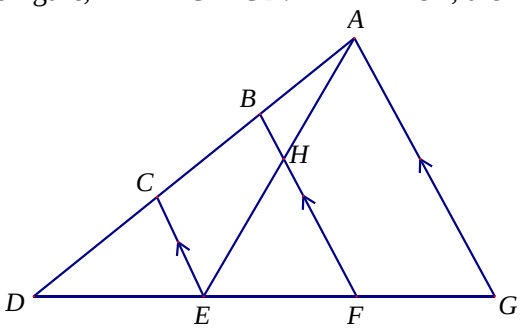
B. 70°.

C. 75°.

D. 80°.

22. [17-18 Mid-year Exam Q10]

In the figure, *AB* = *BC* = *CD*. If *BH* = 1 cm, then *HF* =



A. 2 cm.

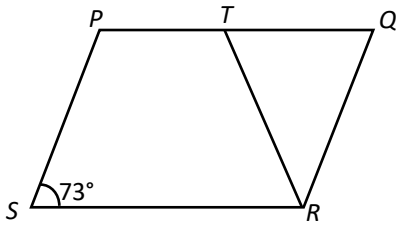
B. 3 cm.

C. 4 cm.

D. 5 cm.

23. [17-18 Final Exam Q3]

In the figure, *PQRS* is a parallelogram and *TR*=*QR*. Find $\angle PTR$.



A. 73°

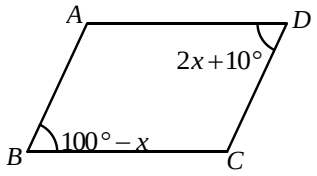
B. 83°

C. 107°

D. 117°

24. [18-19 Mid-year Exam Q8]

In the figure, *ABCD* is a parallelogram. x =



A. 30°.

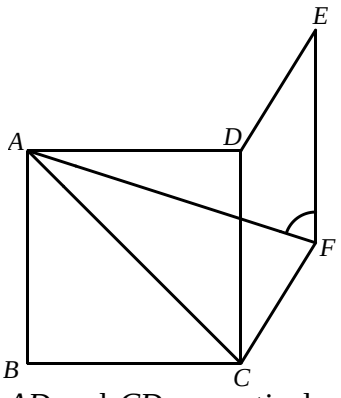
B. 50°.

C. 70°.

D. 90°.

25. [18-19 Mid-year Exam Q9]

In the figure, *ABCD* is a square and *CDEF* is a parallelogram. If $AC = AF$ and $\angle CAF = 40°$, find $\angle AFE$.



A. 70°

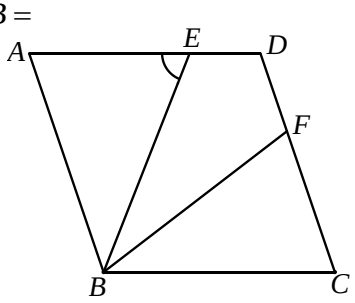
B. 75°

C. 80°

D. 85°

26. [18-19 Mid-year Exam Q17]

In the figure, *ABCD* is a rhombus. *E* and *F* are points lying on *AD* and *CD* respectively such that $DE = DF$ and $\angle EBF = 36°$. If $\angle ADC = 100°$, then $\angle AEB =$



A. 64°.

B. 68°.

C. 72°.

D. 74°.

27. [18-19 Mid-year Exam Q20]

ABCD is a parallelogram. Let *E* be the mid-point of *BC*. If $\angle BAE = \angle CAE = \angle CAD$, which of the following must be true?

I. $AE = EC$

II. $AB = BE$

III. $\Delta ACD \sim \Delta AEB$

A. I and II only

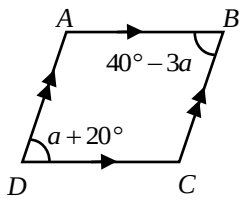
B. I and III only

C. II and III only

D. I, II and III

28. [18-19 Final Exam Q4]

In the figure, *ABCD* is a parallelogram. Find a.



A. 1°

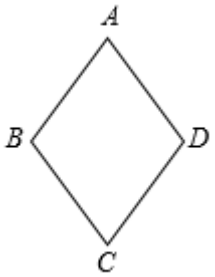
B. 5°

C. 10°

D. 20°

29. [18-19 Final Exam Q5]

In the figure, *ABCD* is a rhombus. If *AC* = 16 cm and *BD* = 12 cm, find the area of *ABCD*.



A. 24 cm^2

B. 96 cm^2

C. 100 cm^2

D. 192 cm^2

~ End ~