

TB(3A) Ch. 5 Quadrilaterals

Multiple Choice Questions

1. [13-14 Mid-year Exam Q1]

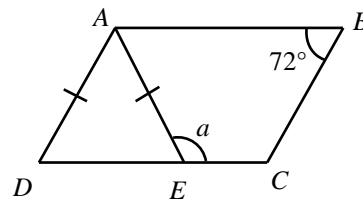
Which of the following is true?

- A. A rhombus must be a kite.
- B. A kite must be a trapezium.
- C. A rectangle must be a square.
- D. A parallelogram must be a rhombus.

2. [13-14 Mid-year Exam Q2]

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

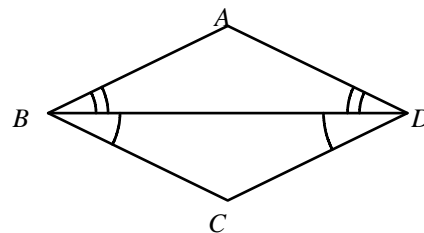
- A. 72°
- B. 108°
- C. 126°
- D. 128°



3. [13-14 Mid-year Exam Q3]

In the figure, $\angle ABD = \angle ADB$ and $\angle CBD = \angle CDB$. Which of the following additional condition can make $ABCD$ a square?

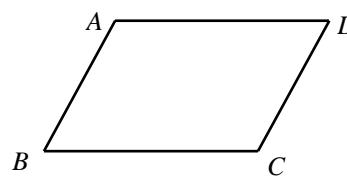
- A. $AB = BC$
- B. $AC \perp BD$
- C. $\angle ABD = \angle DBC = 45^\circ$
- D. AC and BD bisect each other



4. [13-14 Mid-year Exam Q4]

In the figure, $ABCD$ is a quadrilateral. Which of the following is NOT a sufficient condition to make it a parallelogram?

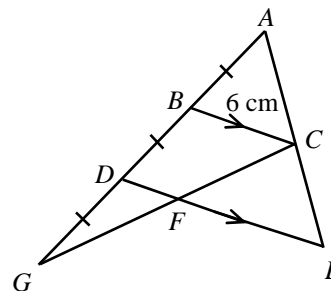
- A. $AB \parallel DC$ and $AD \parallel BC$
- B. $AB = DC$ and $AD = BC$
- C. $AB = DC$ and $AB \parallel CD$
- D. $AB = DC$ and $AD \parallel BC$



5. [13-14 Mid-year Exam Q12]

In the figure, $BC = 6$ cm. B and D are points on AG such that $AB = BD = DG$. CFG and DFE are straight lines. Find the length of FE .

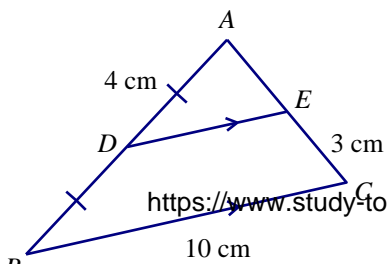
- A. 3 cm
- B. 4 cm
- C. 8 cm
- D. 9 cm



6. [13-14 Mid-year Exam Q19]

In the figure, D and E are points on AB and AC respectively. Find the area of trapezium $BCED$.

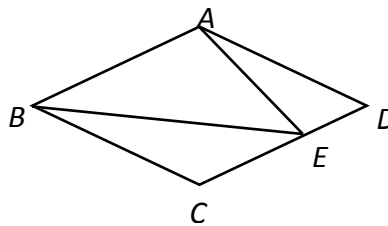
- A. 6 cm^2
- B. 18 cm^2
- C. 22.5 cm^2
- D. 24 cm^2



7. [13-14 Mid-year Exam Q20]

In the figure, $ABCD$ is a rhombus and E is point on CD . If its diagonals are 10 cm and 24 cm, find the area of $\triangle ABE$.

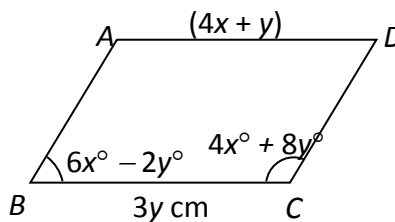
- A. 30 cm^2
- B. 60 cm^2
- C. 90 cm^2
- D. 120 cm^2



8. [13-14 S6 Mock Exam Q9]

In the figure, $ABCD$ is a parallelogram. Find x and y .

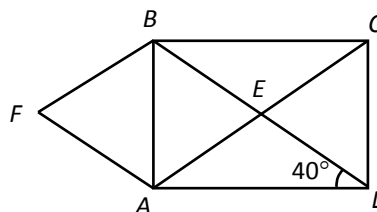
- A. $x = \frac{90}{11}, y = \frac{180}{11}$
- B. $x = \frac{90}{13}, y = \frac{180}{13}$
- C. $x = \frac{70}{11}, y = \frac{210}{11}$
- D. $x = \frac{70}{13}, y = \frac{210}{13}$



9. [13-14 Final Exam Q3]

In the figure, $ABCD$ is a rectangle and $AEBF$ is a rhombus. AC and BD intersect at E . Find $\angle FAB$.

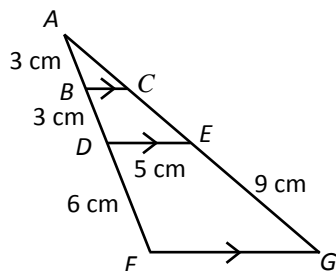
- A. 40°
- B. 50°
- C. 80°
- D. 100°



10. [13-14 Final Exam Q4]

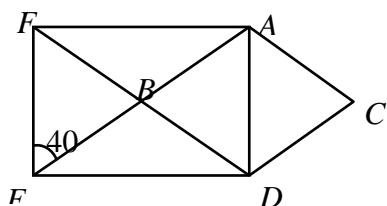
In the figure, $ABDF$ and $ACEG$ are straight lines. Find the perimeter of $\triangle AFG$.

- A. 35 cm
- B. 37 cm
- C. 40 cm
- D. 45 cm



11. [14-15 Mid-year Exam Q9]

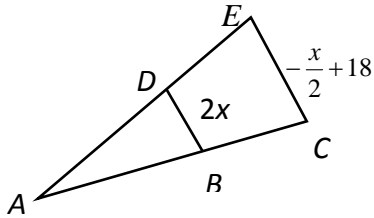
In the figure, $FEDA$ is a rectangle. AE meets FD at B and $ACDB$ is a rhombus. Find $\angle ACD$.



- A. 40°
- B. 50°
- C. 80°
- D. 100°

12. [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 .

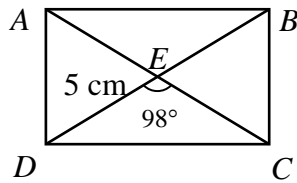


- A. 4
- B. 7.2
- C. 8.4
- D. 12

13. [14-15 Mid-year Exam Q17]

In the figure, $ABCD$ is a rectangle. Find the area of $\triangle DCE$.

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

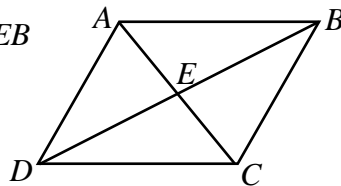


14. [14-15 Mid-year Exam Q18]

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. $DC = BC$

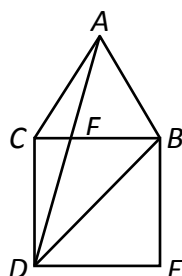
- A. I only
- B. I and II only
- C. II and III only
- D. All of the above



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

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

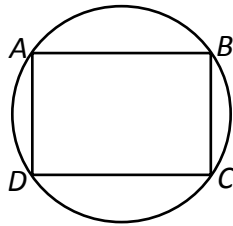
- A. 45°
- B. 75°
- C. 105°
- D. 120°



16. [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.

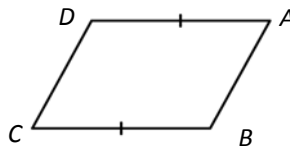
- A. 1 : 9
- B. 3 : 5π
- C. 6 : 5π
- D. 3 : 10



17. [14-15 Final Exam Q7]

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

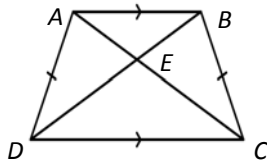
- I. $AB = CD$
- II. $AD \parallel BC$
- III. $AB \parallel CD$



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

18. [14-15 Final Exam Q18]

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

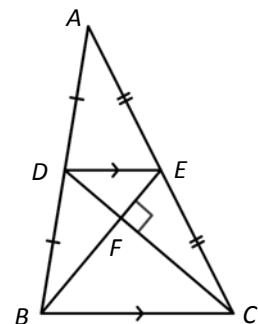


- A. $\triangle ABE \sim \triangle CDE$
- B. $\triangle ABD \cong \triangle BAC$
- C. $\frac{AE}{AC} = \frac{BD}{BE}$
- D. $\frac{AB}{CD} = \frac{AE}{CE}$

19. [14-15 Final Exam Q30]

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

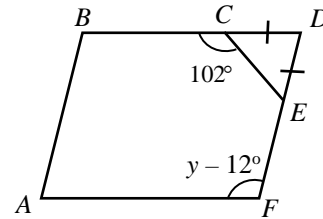
- A. 6
- B. 8
- C. 9
- D. 12



20. [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°



21. [15-16 Mid-year Exam Q12]

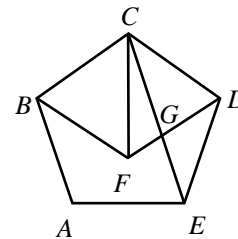
Which of the following must be true?

- 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

22. [15-16 Mid-year Exam Q17]

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

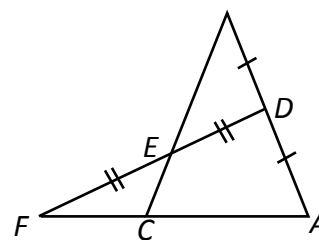
- A. 18°
- B. 27°
- C. 36°
- D. 40°



23. [15-16 Mid-year Exam Q20]

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

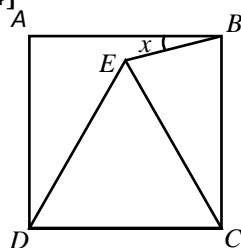
- A. 1 : 1
- B. 1 : 2
- C. 2 : 1
- D. 3 : 1



24. [15-16 Final Exam Q14]

In the figure, $ABCD$ is a square and $\triangle CDE$ is an equilateral triangle. Find x .

- A. 10°
- B. 15°
- C. 30°
- D. 60°

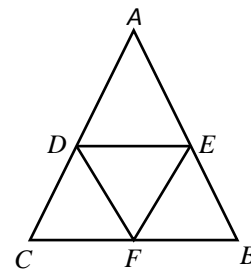


25. [15-16 Final Exam Q15]

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.

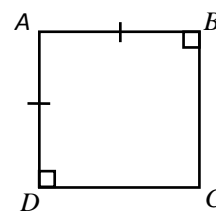
- A. I only
- B. II only
- C. III only
- D. I, II and III



26. [15-16 Final Exam Q21]

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

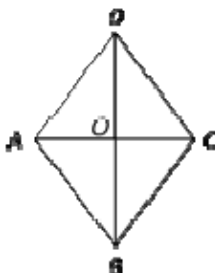
- A. $ABCD$ is a square.
- B. $ABCD$ is a parallelogram.
- C. $ABCD$ is a rhombus.
- D. $ABCD$ is a kite.



27. [16-17 Mid-year Exam Q9]

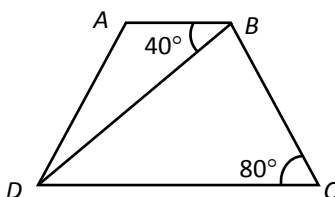
In the figure, $ABCD$ is a rhombus, where $OA = 3$ cm and $OD = 4$ cm. Find the area of $ABCD$.

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



28. [16-17 Mid-year Exam Q18]

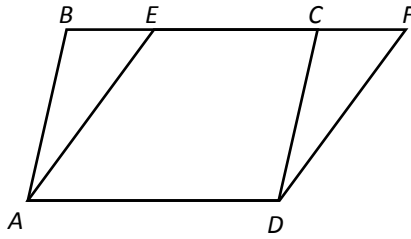
In the figure, $ABCD$ is an isosceles trapezium. Which of the following may not be correct?



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

29. [16-17 Mid-year Exam Q20]

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

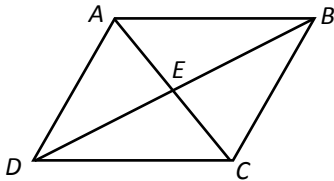


- I. $\angle ADC = \angle DCF$
- II. $\triangle ABE \cong \triangle DCF$
- III. $\angle ADF = \angle ABE + \angle BAE$

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

30. [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

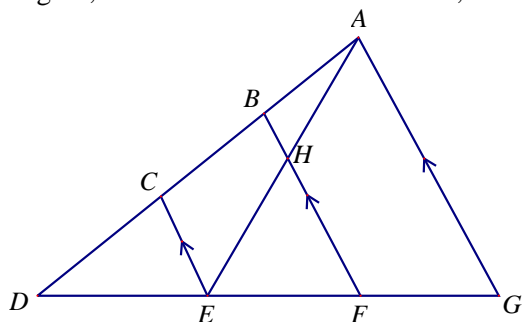
31. [17-18 Mid-year Exam Q9]

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

- A. 65° .
- B. 70° .
- C. 75° .
- D. 80° .

32. [17-18 Mid-year Exam Q10]

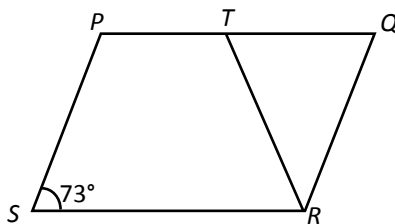
In the figure, $AB = BC = CD$. If $BH = 1$ cm, then $HF =$



- A. 2 cm.
- B. 3 cm.
- C. 4 cm.
- D. 5 cm.

33. [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°

~ End ~