

## Important Definitions

*Multiple-choice and select-all questions about definitions.*

**Question 1** *An equilateral quadrilateral is called ...*

**Multiple Choice:**

- (a) a square.
  - (b) a rectangle.
  - (c) a rhombus. ✓
  - (d) a trapezoid.
  - (e) none of these.
- 

**Question 2** *An equiangular quadrilateral is called ...*

**Multiple Choice:**

- (a) a square.
  - (b) a rectangle. ✓
  - (c) a rhombus.
  - (d) a trapezoid.
  - (e) none of these.
- 

**Question 3** *When three (or more) points all lie on the same line, we say they are ...*

**Multiple Choice:**

- (a) coplanar.
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Learning outcomes:  
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- (b) *collinear.* ✓
  - (c) *conjoined.*
  - (d) *concurrent.*
  - (e) *none of these.*
- 

**Question 4** When three (or more) lines all lie on the same point, we say they are ...

**Multiple Choice:**

- (a) *coplanar.*
  - (b) *collinear.*
  - (c) *conjoined.*
  - (d) *concurrent.* ✓
  - (e) *none of these.*
- 

**Question 5** An *altitude* in a triangle ...

**Multiple Choice:**

- (a) *contains the midpoint of the side of a triangle and is perpendicular to that side.*
  - (b) *contains a vertex of a triangle and is perpendicular to the line containing the other side.* ✓
  - (c) *contains a vertex of a triangle and the midpoint of the opposite side.*
  - (d) *contains a vertex and bisects that angle.*
  - (e) *none of these.*
- 

**Question 6** A *median* in a triangle ...

**Multiple Choice:**

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- (a) *contains the midpoint of the side of a triangle and is perpendicular to that side.*
  - (b) *contains a vertex of a triangle and is perpendicular to the line containing the other side.*
  - (c) *contains a vertex of a triangle and the midpoint of the opposite side. ✓*
  - (d) *contains a vertex and bisects that angle.*
  - (e) *none of these.*
- 

**Question 7** *The **circumcenter** of a triangle is ...*

**Select All Correct Answers:**

- (a) *the point of concurrency of the medians.*
  - (b) *the point of concurrency of the angle bisectors.*
  - (c) *the point of concurrency of the perpendicular bisectors. ✓*
  - (d) *the point of concurrency of the altitudes.*
  - (e) *the balance point for the triangle.*
  - (f) *the center in the triangle.*
  - (g) *the center of the incircle.*
  - (h) *the center of the circumcircle. ✓*
  - (i) *equidistant from the sides of the triangle.*
  - (j) *equidistant from the vertices of the triangle. ✓*
- 

**Question 8** *The **incenter** of a triangle is ...*

**Select All Correct Answers:**

- (a) *the point of concurrency of the medians.*
- (b) *the point of concurrency of the angle bisectors. ✓*
- (c) *the point of concurrency of the perpendicular bisectors.*
- (d) *the point of concurrency of the altitudes.*

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- (e) *the balance point for the triangle.*
  - (f) *the center in the triangle.*
  - (g) *the center of the incircle. ✓*
  - (h) *the center of the circumcircle.*
  - (i) *equidistant from the sides of the triangle. ✓*
  - (j) *equidistant from the vertices of the triangle.*
- 

**Question 9** The **centroid** of a triangle is ...

**Select All Correct Answers:**

- (a) *the point of concurrency of the medians. ✓*
  - (b) *the point of concurrency of the angle bisectors.*
  - (c) *the point of concurrency of the perpendicular bisectors.*
  - (d) *the point of concurrency of the altitudes.*
  - (e) *the balance point for the triangle. ✓*
  - (f) *the center in the triangle.*
  - (g) *the center of the incircle.*
  - (h) *the center of the circumcircle.*
  - (i) *equidistant from the sides of the triangle.*
  - (j) *equidistant from the vertices of the triangle.*
- 

**Question 10** The **orthocenter** of a triangle is ...

**Select All Correct Answers:**

- (a) *the point of concurrency of the medians.*
- (b) *the point of concurrency of the angle bisectors.*
- (c) *the point of concurrency of the perpendicular bisectors.*
- (d) *the point of concurrency of the altitudes. ✓*

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- (e) *the balance point for the triangle.*
  - (f) *the center in the triangle.*
  - (g) *the center of the incircle.*
  - (h) *the center of the circumcircle.*
  - (i) *equidistant from the sides of the triangle.*
  - (j) *equidistant from the vertices of the triangle.*
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**Question 11** *A midsegment in a triangle is . . .*

**Select All Correct Answers:**

- (a) *a segment in the middle.*
  - (b) *a segment connecting the midpoints of two sides. ✓*
  - (c) *parallel to a side of the triangle. ✓*
  - (d) *perpendicular to a side of the triangle.*
  - (e) *also called a median.*
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