

---

# Math 1166: Parallels in Geometry!

---

Bart Snapp and Brad Findell

February 8, 2018

## Contents

Questions on Definitions . . . . .	3
------------------------------------	---

## Questions on Definitions

*Short-answer, multiple-choice, and select-all questions about definitions.*

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

---

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

---

**Question 3** *An regular quadrilateral is called a* .

---

Author(s): Bart Snapp and Brad Findell

*Questions on Definitions*

---

**Question 4** *An line segment between two points on a circle is called a  of the circle.*

---

**Question 5** *A  measures  $180^\circ$ . (Hint: Answer with two words.)*

---

**Question 6** *Two angles whose measures sum to  $180^\circ$  are said to be .*

*Questions on Definitions*

---

**Question 7** *Two angles whose measures sum to  $90^\circ$  are said to be ?.*

---

**Question 8** *Three (or more) points that lie on the same line are said to be ?.*

---

**Question 9** *Three (or more) lines that lie on the same point are said to be ?.*

---

**Question 10** In a circle, the measure of an  angle is  the measure of the corresponding central angle. (Hint: For the second blank, answer with a word.)

---

**Question 11** 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 12** A *median* 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 13** The *circumcenter* of a triangle is ... [select all]

**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 14** *The **incenter** of a triangle is ... [select all]*

**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 15** The **centroid** of a triangle is ... [select all]

**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 16** The **orthocenter** of a triangle is ... [select all]

**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 17** *A midsegment in a triangle is ... [select all]*

**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.*

*Questions on Definitions*

---