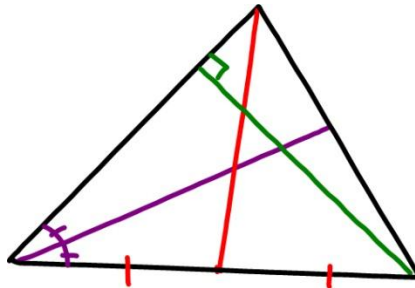


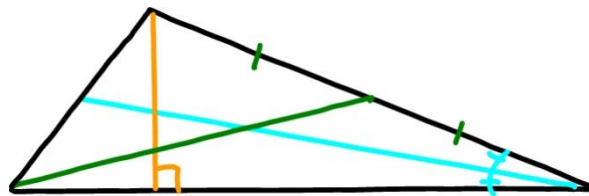
**Answer Key: Pages 4-6**

**Medians, altitudes and bisectors**

1. A median of a triangle is a segment from a \_\_\_\_\_ to the midpoint of the \_\_\_\_\_ side.
2. An altitude of a triangle is the \_\_\_\_\_ segment from a vertex to the line that contains the opposite side.
3. True or False: An altitude can be outside of a triangle?
4. The \_\_\_\_\_ is the ray that divides the angle into two congruent adjacent angles.
5. Use the figure below to identify the median, altitude and angle bisector



6. Use the figure below to identify the median, altitude and angle bisector

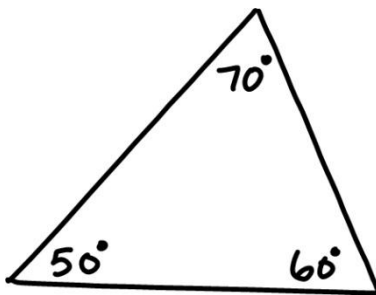


**Bisector theorems**

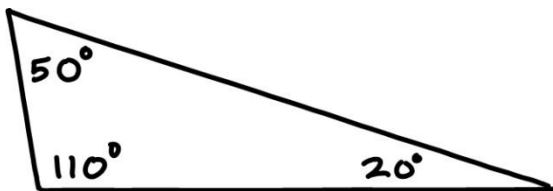
7. Finish the theorem: if a point lies on the perpendicular bisector of a segment, then the point is \_\_\_\_\_ from the endpoints of the segment.
8. Finish the theorem: if a point lies on the \_\_\_\_\_ then the point is equidistant from the sides of an angle

**Triangle inequalities**

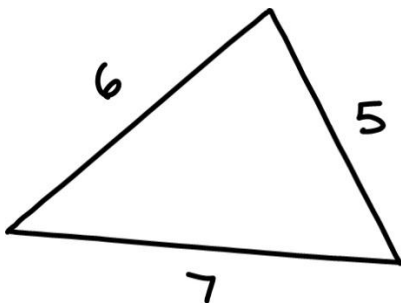
9. Use the figure below to identify the longest and shortest sides of the triangle



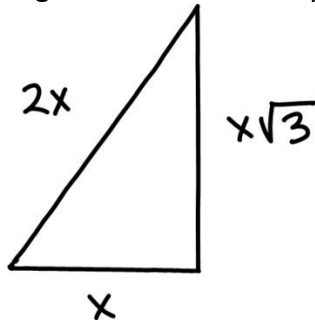
10. Use the figure below to identify the longest and shortest sides of the triangle



11. Use the figure below to identify the largest and smallest angles of the triangle



12. Use the figure below to identify the largest and smallest angles of the triangle



13. Determine if it's possible to have a triangle with the following lengths:

3, 4, 5

14. Determine if it's possible to have a triangle with the following lengths:

2, 19, 7

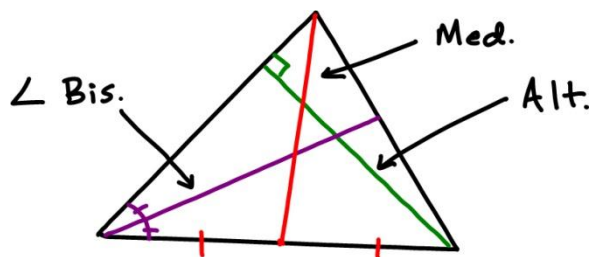
15. Determine if it's possible to have a triangle with the following lengths:

12, 15, 17

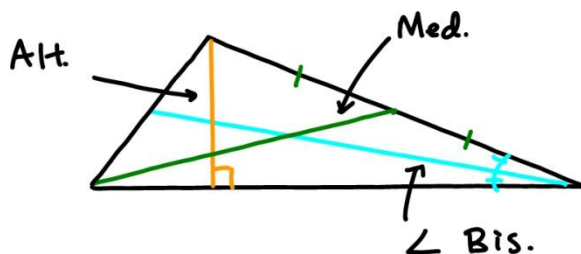
## Answer Key

### Medians, altitudes and bisectors

1. A median of a triangle is a segment from a **vertex** to the midpoint of the **opposite** side.
2. An altitude of a triangle is the **perpendicular** segment from a vertex to the line that contains the opposite side.
3. True or False: An altitude can be outside of a triangle? **TRUE**
4. The **bisector of an angle** is the ray that divides the angle into two congruent adjacent angles.
5. Use the figure below to identify the median, altitude and angle bisector



6. Use the figure below to identify the median, altitude and angle bisector

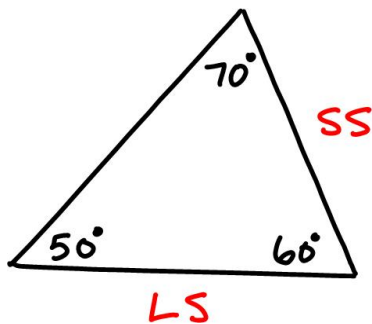


**Bisector theorems**

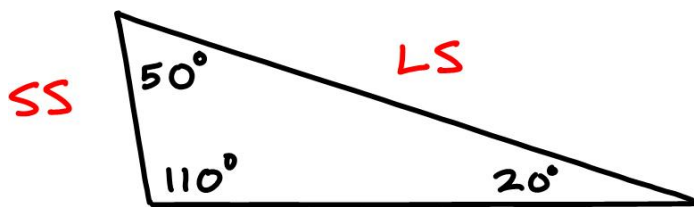
7. Finish the theorem: if a point lies on the perpendicular bisector of a segment, then the point is **equidistant** from the endpoints of the segment.
8. Finish the theorem: if a point lies on **the bisector of an angle** then the point is equidistant from the sides of an angle

**Triangle inequalities**

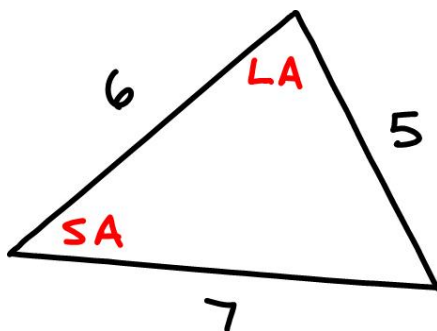
9. Use the figure below to identify the longest and shortest sides of the triangle



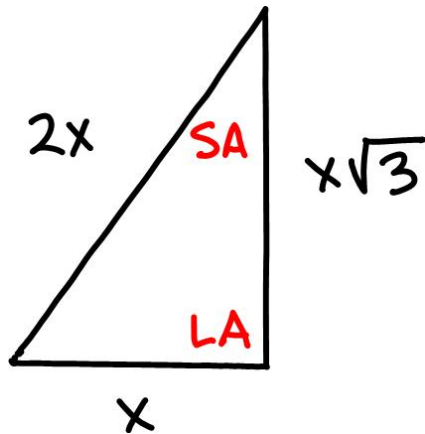
10. Use the figure below to identify the longest and shortest sides of the triangle



11. Use the figure below to identify the largest and smallest angles of the triangle



12. Use the figure below to identify the largest and smallest angles of the triangle



13. Determine if it's possible to have a triangle with the following lengths: 3, 4, 5

**YES**

14. Determine if it's possible to have a triangle with the following lengths: 2, 19, 7

**NO**

15. Determine if it's possible to have a triangle with the following lengths: 12, 15, 17

**YES**