

The Triangle Inequality Theorem

State if the three numbers can be the measures of the sides of a triangle.

1) 7, 5, 4

2) 3, 6, 2

3) 5, 2, 4

4) 8, 2, 8

5) 9, 6, 5

6) 5, 8, 4

7) 4, 7, 8

8) 11, 12, 9

9) 3, 10, 8

10) 1, 13, 13

11) 2, 15, 16

12) 10, 18, 10

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

13) 9, 5

14) 5, 8

15) 6, 10

16) 6, 9

17) 11, 8

18) 14, 11

The Triangle Inequality Theorem

State if the three numbers can be the measures of the sides of a triangle.

1) 7, 5, 4

Yes

2) 3, 6, 2

No

3) 5, 2, 4

Yes

4) 8, 2, 8

Yes

5) 9, 6, 5

Yes

6) 5, 8, 4

Yes

7) 4, 7, 8

Yes

8) 11, 12, 9

Yes

9) 3, 10, 8

Yes

10) 1, 13, 13

Yes

11) 2, 15, 16

Yes

12) 10, 18, 10

Yes

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

13) 9, 5

 $4 < x < 14$

14) 5, 8

 $3 < x < 13$

15) 6, 10

 $4 < x < 16$

16) 6, 9

 $3 < x < 15$

17) 11, 8

 $3 < x < 19$

18) 14, 11

 $3 < x < 25$