Name : _____

Score : _____ Date : _____

MATH MONKS

Triangle Inequality Theorem Worksheet

1 Triangle Inequality Theorem

The sum of the lengths of any two sides of a triangle is _____ than the length of the third side.

2 Use Triangle Inequality theorem to show whether the given numbers can be the length of the sides of the triangle.

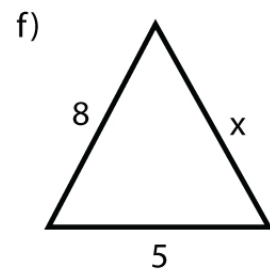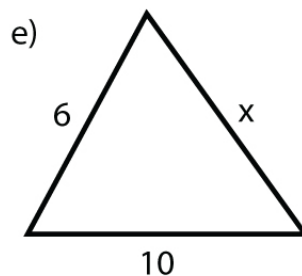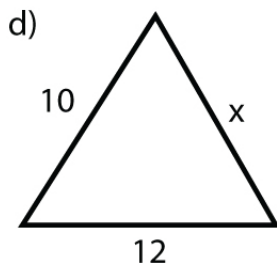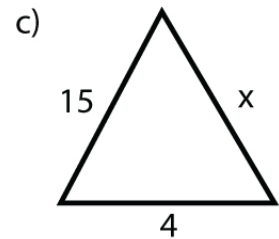a) 6 , 9 , 8
Yes / No

b) 8 , 72, 67
Yes / No

c) 4 , 10 , 16
Yes / No

d) 2 , 13 , 30
Yes / No

3 Use Triangle Inequality theorem to solve for x

a)

12   x
14

_____

b)

8   x
6

_____

c)

15   x
4

_____

d)

10   x
12

_____

e)

6   x
10

_____

f)

8   x
5

_____

MATH MONKS

Triangle Inequality Theorem Worksheet

Answers

1 Triangle Inequality Theorem

The sum of the lengths of any two sides of a triangle is __greater__ than the length of the third side.

2 Use Triangle Inequality theorem to show whether the given numbers can be the length of the sides of the triangle.

a) 6 , 9 , 8

Yes / No

Yes
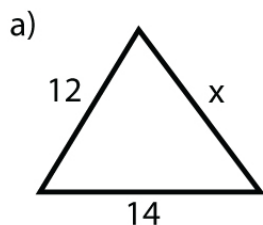
b) 8 , 72, 67

Yes / No

Yes
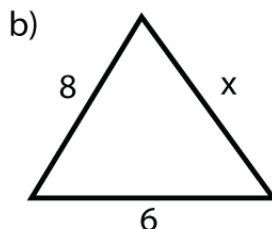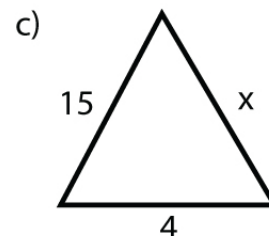
c) 4 , 10 , 16

Yes / No

No

d) 2 , 13 , 30

Yes / No

No

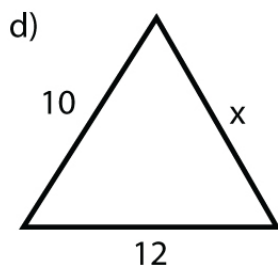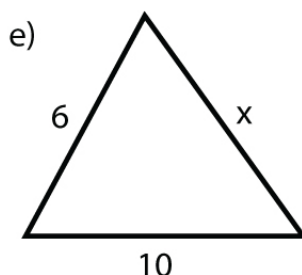**3** Use Triangle Inequality theorem to solve for x

a)

12   x

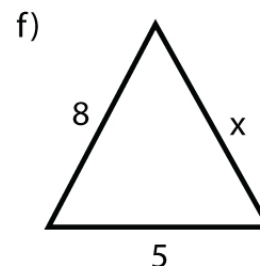14

2 < x < 26

b)

8   x

6

2 < x < 14

c)

15   x

4

11 < x < 19

d)

10   x

12

2 < x < 22

e)

6   x

10

4 < x < 16

f)

8   x

5

3 < x < 13