



5th  
Basic

6th  
Advanced

# Helping With Math

USA  
GRADES

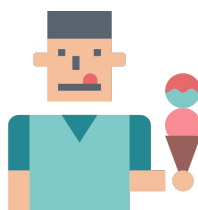
## Area of Triangles

*Suitable for students*  
**aged 9-11**



This pack is suitable for learners aged 9-11 years old or 5th and 6th graders (USA). The content covers fact files and relevant basic and advanced activities involving triangles.

- A triangle is described as a three-sided polygon which closes in a space.
- To form the three sides, it uses lines, line segments or rays.
- A triangle has three sides, three angles and three vertices.
- There are different types of triangles depending on its sides - equilateral, isosceles, and scalene.
- To get the area of a triangle, you need to know its base and perpendicular height.

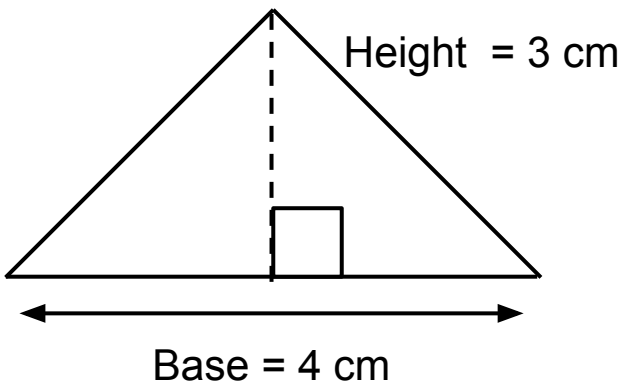
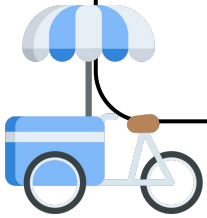


# FORMULAS

The area of a triangle can be defined as the total space or region which is enclosed inside any types of triangle.

$$A = \frac{1}{2} \times b \times h$$

$b$  = base;  $h$  = perpendicular height



$$A = \frac{1}{2} \times b \times h$$

$$A = \frac{1}{2} \times 4 \text{ cm} \times 3 \text{ cm}$$

$$A = \frac{1}{2} \times 12 \text{ cm}^2$$

$$A = 6 \text{ cm}^2$$

**TO FIND THE BASE:**

$$b = \frac{2A}{h}$$

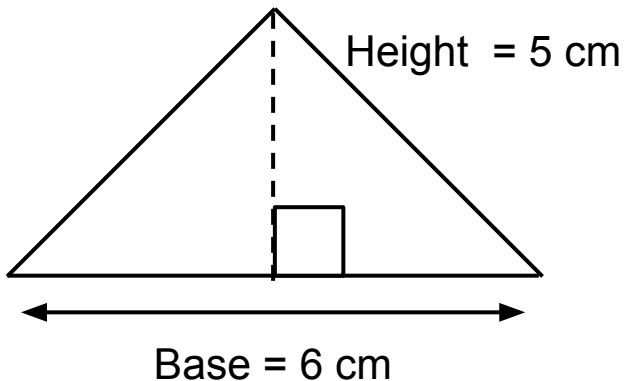
**TO FIND THE HEIGHT:**

$$h = \frac{2A}{b}$$



OPEN

**LET'S PRACTICE!**



# TABLE OF ACTIVITIES

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# ICE CREAM FLAVORS

G5  
Basic

There are many ice cream flavors available. As you are choosing your preferred flavor, choose the correct letter of your answers for the questions below.

1. If the height of the triangle is 9 ft and the base is 4 ft. Compute for the Area of the triangle.

- a.  $16 \text{ ft}^2$
- b.  $33 \text{ ft}^2$
- c.  $18 \text{ ft}^2$

2. The height and the base of the triangle is 12 in and 19 in. Find the area of the triangle.

- a.  $115 \text{ in}^2$
- b.  $114 \text{ in}^2$
- c.  $113 \text{ in}^2$

3. Find the area of the triangle whose height is 6 yd and base is 11 yd.

- a.  $22 \text{ yd}^2$
- b.  $33 \text{ yd}^2$
- c.  $23 \text{ yd}^2$

4. Find the area of the triangle whose Base = 3 yd and Height = 8yd.

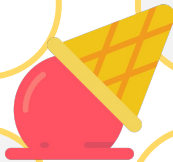
- a.  $12 \text{ ft}^2$
- b.  $33 \text{ ft}^2$
- c.  $18 \text{ ft}^2$

5. Find the area of the triangle whose Base = 13 yd and Height = 18yd.

- a.  $116 \text{ yd}^2$
- b.  $117 \text{ yd}^2$
- c.  $118 \text{ yd}^2$

6. Find the area of the triangle whose Base = 4 ft and Height = 8ft.

- a.  $16 \text{ ft}^2$
- b.  $6 \text{ ft}^2$
- c.  $18 \text{ ft}^2$



# SCHOOL'S ACTIVITY

G5  
Basic

In today's class, you will be learning how to make your favorite ice cream flavors. To help you with this, identify first if the statements below are true or false. If false, underline the word that made it incorrect and write the correct one in the space provided.

A triangle is described as a two-sided polygon which closes in a space.

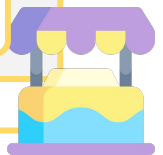


To form the three sides, a triangle uses lines, line segments or rays.



A triangle has three sides, three angles and four vertices.

There are different types of triangles which are equilateral, isosceles, and scalene.



To get the area of a triangle, you need to know its base and equiangular height.



# BANANA SPLIT

G5  
Basic

Arrange the ice cream to make a beautiful banana split. Arrange the letters below too to form the answers to the descriptions.

1. It is a polygon with three sides and three vertices

E R T G I N A L

Answer : \_\_\_\_\_



2. This is the bottom line of a triangle.

E B A S

Answer : \_\_\_\_\_

3. It is the total space or region which is enclosed inside any types of triangle

E R A A

Answer : \_\_\_\_\_



4. This is one type of triangle

E C S E N A L

Answer : \_\_\_\_\_



# MISSING ICE CREAM TOPPINGS

G5  
Basic

Write down the toppings of your choice and complete the sentences below based on what you have learned about triangles.

To form the three sides, a triangle uses \_\_\_\_\_,  
\_\_\_\_\_ or rays.



To get the area of a triangle, you need to know its  
\_\_\_\_\_ and \_\_\_\_\_.



A \_\_\_\_\_ has three sides, three angles and three vertices.

The \_\_\_\_\_ of a triangle can be defined as the total space or region enclosed inside any types of triangle.



Enumerate the different types of triangles depending on its sides.


# TRIANGULAR LOCATION

G5  
Basic

A new ice cream shop will be opening in town. Help Mr. Dewy identify the area of the ice cream shop's triangular location. Please show your solution and answer.



Mr. Dewy is planning to put up an ice cream shop in between the barber shop and grocery store, help Mr. Dewy identify the triangular area of the location where he will build his new ice cream shop with the following data:

**Base = 4 m**  
**Height = 24 m**

PLEASE SHOW YOUR  
SOLUTION AND ANSWER  
HERE:





# MIX AND MATCH

G6  
Advanced

Mix and match different flavors and toppings for your order. Match also the given area and height from Column A to its correct base from Column B.

## COLUMN A



Area =  $48 \text{ ft}^2$   
Height = 12 ft

Area =  $52 \text{ ft}^2$   
Height = 8 ft

Area =  $36 \text{ ft}^2$   
Height = 9 ft

Area =  $160 \text{ ft}^2$   
Height = 20 ft

Area =  $180 \text{ ft}^2$   
Height = 18 ft

## COLUMN B

Base = 16 ft

Base = 8 ft

Base = 20 ft

Base = 8 ft

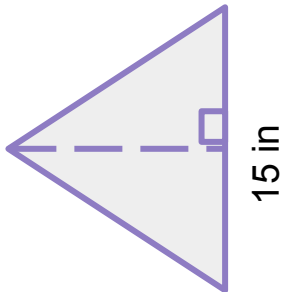
Base = 13 ft



# THE INGREDIENTS

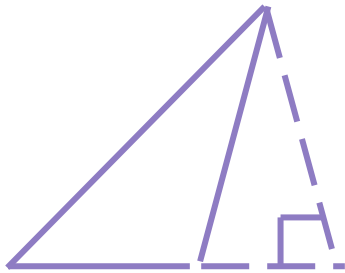
G6  
Advanced

There have been missing ingredients to make a perfect ice cream. In the triangles below, the perpendicular height is also missing. Compute for the height using the formula that you've learned.



Area =  $90 \text{ in}^2$

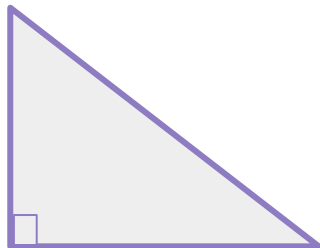
Height =



5 yd

Area =  $90 \text{ yd}^2$

Height =



14 in

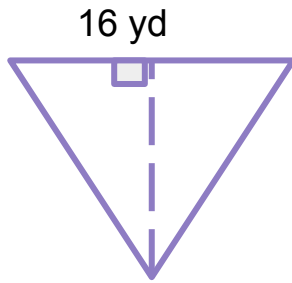
Area =  $119 \text{ in}^2$

Height =



# THE INGREDIENTS

G6  
Advanced



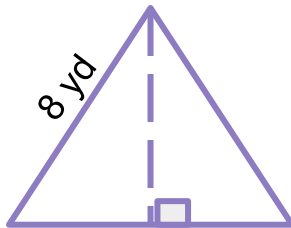
Area =  $176 \text{ yd}^2$

Height =



Area =  $116 \text{ mm}^2$

Height =



Area =  $28 \text{ yd}^2$

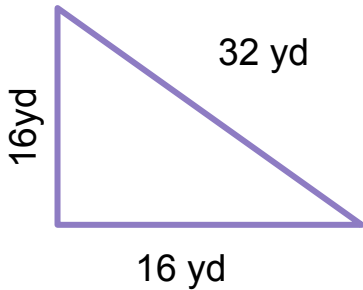
Height =



# FREE ICE CREAM!

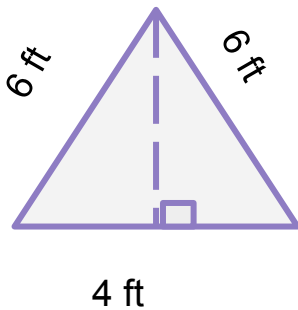
G6  
Advanced

Your favorite ice cream shop is giving away free ice cream sundaes for those who will be able to identify the height, base, and area of the triangles below.



Base =

Height =



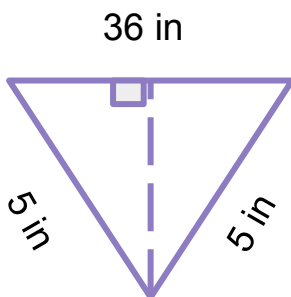
Base =

Height =



Base =

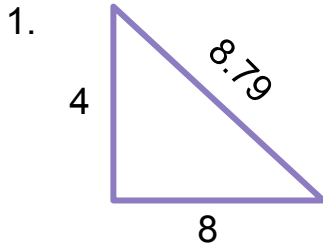
Height =



# MY OWN BUSINESS

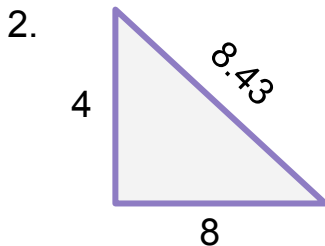
G6  
Advanced

Start your own ice cream business and find the area of the triangles shown below. Don't forget to write down your solutions.



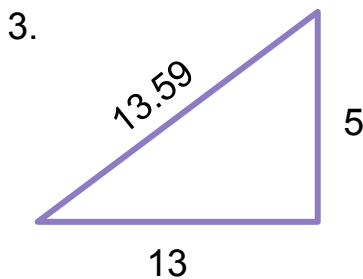
Area = \_\_\_\_\_

An empty rounded rectangular box for writing the solution to problem 1.



Area = \_\_\_\_\_

An empty rounded rectangular box for writing the solution to problem 2.



Area = \_\_\_\_\_



An empty rounded rectangular box for writing the solution to problem 3.



# FAVORITE FLAVOR

G6  
Advanced

You can't remember the name of your favorite ice cream flavor, but you can explain how it tastes. Provide the formulas and explanations being asked below.



FORMULA FOR BASE

HOW DID YOU GET THE FORMULA FOR BASE?



CLOSED

FORMULA FOR HEIGHT

HOW DID YOU GET THE FORMULA FOR HEIGHT?



# ANSWER GUIDE

## Activity 1

- |      |      |
|------|------|
| 1. C | 4. A |
| 2. B | 5. B |
| 3. B | 6. A |

## Activity 2

- |      |      |
|------|------|
| 1. F | 4. T |
| 2. T | 5. F |
| 3. F |      |

## Activity 3

- |             |            |
|-------------|------------|
| 1. TRIANGLE | 4. SCALENE |
| 2. BASE     |            |
| 3. AREA     |            |

## Activity 4

- |                         |                |
|-------------------------|----------------|
| 1. LINES, LINE SEGMENTS | 4. AREA        |
| 2. BASE AND HEIGHT      | 5. EQUILATERAL |
| 3. TRIANGLE             | - ISOSCELES    |
|                         | - SCALENE      |



# ANSWER GUIDE

## Activity 5

$$A = \frac{1}{2} \times b \times h$$

$$A = \frac{1}{2} \times 96 \text{ m}^2$$

$$A = \frac{1}{2} \times (4\text{m}) \times (24\text{m})$$

$$A = 48 \text{ m}^2$$

## Activity 6

1. 8 FT      4. 16 FT
2. 13 FT     5. 20 FT
3. 8 FT

## Activity 7

1. 12 IN      4. 22 YD
2. 36 YD      5. 58 MM
3. 17 IN      6. 7 YD

## Activity 8

1. B = 32 YD    H = 16 YD    A = 256 YD<sup>2</sup>
2. B = 4 FT      H = 6 FT      A = 12 FT<sup>2</sup>
3. B = 36 IN     H = 5 IN      A = 90 IN<sup>2</sup>





# ANSWER GUIDE

## Activity 9

1.  $A = 16$
2.  $A = 16$
3.  $A = 32.5$

## Activity 10

### FORMULA FOR BASE

$$b = \frac{2A}{h}$$

$$A = \frac{1}{2} \times b \times h$$

$$2(A = \frac{1}{2} \times b \times h)$$

$$\frac{2 \times A = b \times h}{h}$$

$h$

$$b = \frac{2A}{h}$$

### FORMULA FOR HEIGHT

$$h = \frac{2A}{b}$$

$$2(A = \frac{1}{2} \times b \times h)$$

$$\frac{2 \times A = b \times h}{b}$$

$b$

$$h = \frac{2A}{b}$$



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