



4th  
Basic

5th  
Advanced

# Helping With Math

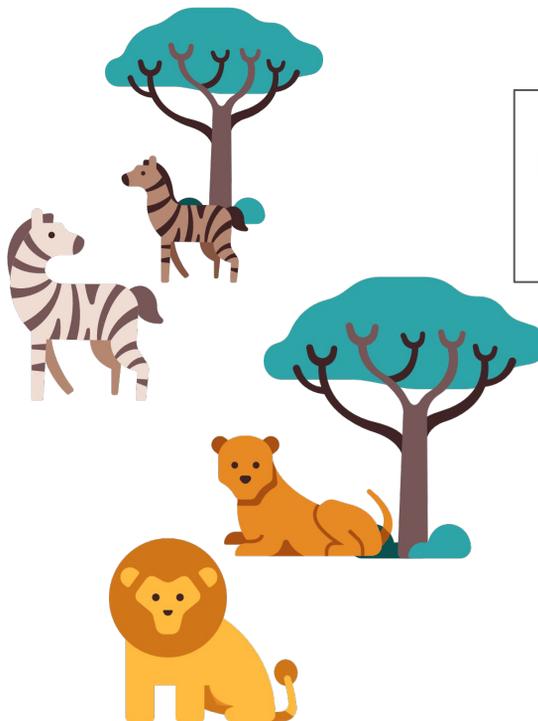
USA  
GRADES

## Right Angles

Suitable for students  
aged 8-10



This pack is suitable for learners aged 8-10 years old or 4th to 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving right angles.



Let us learn about right angles here!



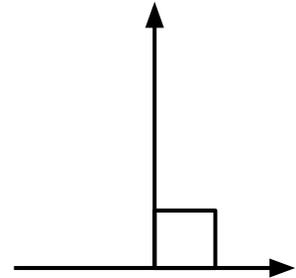
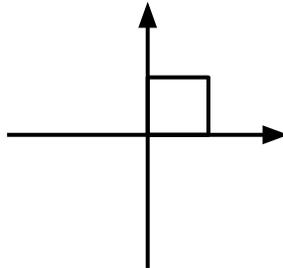
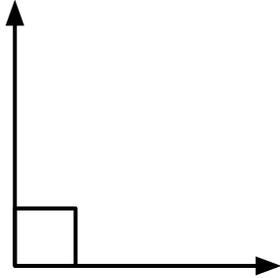
- Angles are formed when two rays meet at a vertex.
- It has two parts: arms and vertex. Arms are the two lines that meet to form an angle, while vertex is the corner point where the arms meet.
- Right angle is the type of angle that measures exactly  $90^\circ$ .
- It is shown in figures as a box to indicate that the internal angle is a right angle.



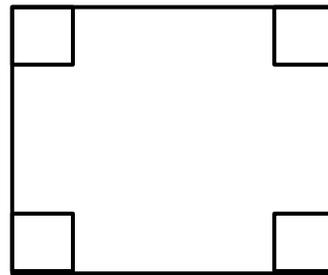
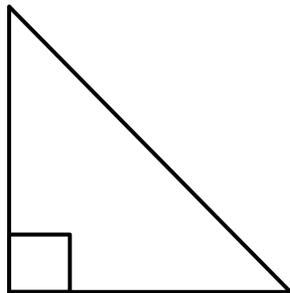
## CONCEPTS



When two straight lines are perpendicular to each other at the intersection, they form right angles.

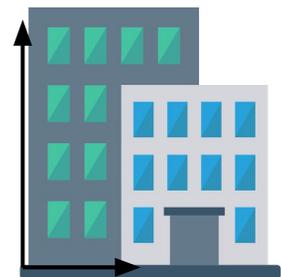
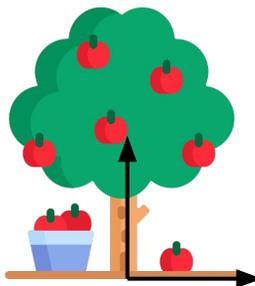


Right angles can also be found in different shapes.  
Here are some examples:

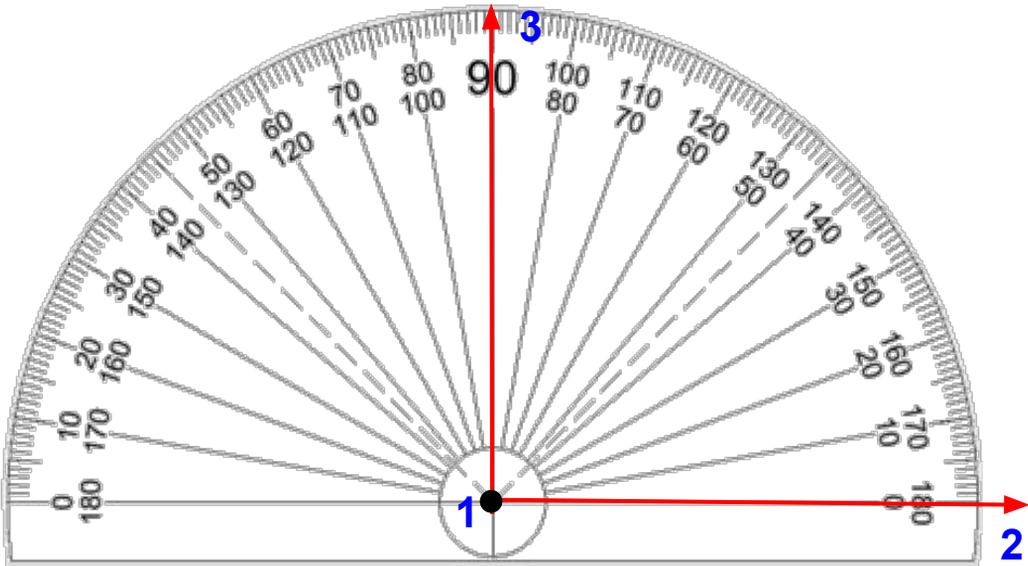


If we are keen with details, we would notice that there are real life items where we can also find right angles.

Such as the following:



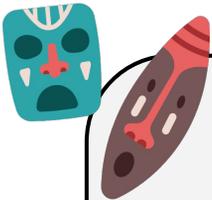
## MEASURING USING A PROTRACTOR



1. Place the vertex of the angle in the middle of the protractor.
2. One of its arm should lie along  $0^\circ$ .
3. The other arm should lie along  $90^\circ$  to show that this is a right angle.

### PRACTICE TIME!

Draw a right angle and identify its parts.



# TABLE OF ACTIVITIES

<b>Ages 8-9</b> (Basic)		<u>4th Grade</u>
1	The Right One	
2	In the Desert	
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5	We Need a Bridge	
<b>Ages 9-10</b> (Advanced)		<u>5th Grade</u>
6	How Many Turns?	
7	Own Places	
8	Help the Guide	
9	Safari Tour	
10	Draw for Caleb	



# DESCRIBE EACH

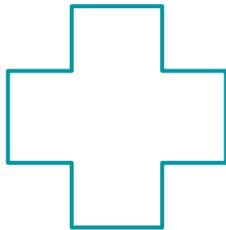
G4  
Basic

There are uniqueness in each of the animals. Fill in the blanks below and show the number of sides and right angles that each figures have.



This shape has \_\_\_\_\_ sides.

It has \_\_\_\_\_ right angles.



This shape has \_\_\_\_\_ sides.

It has \_\_\_\_\_ right angles.



This shape has \_\_\_\_\_ sides.

It has \_\_\_\_\_ right angles.



This shape has \_\_\_\_\_ sides.

It has \_\_\_\_\_ right angles.



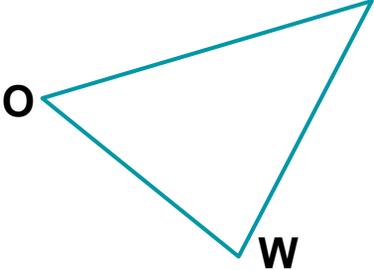
# IN THE DESERT

G4  
Basic

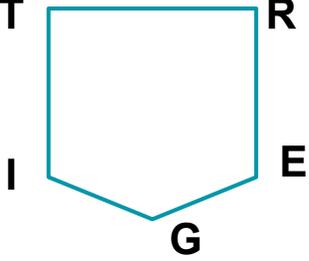
It is your first time to visit a desert which makes you very excited. While taking photos, you noticed different figures. Identify whether the given angles are obtuse, acute or right angles.

1. 

$\angle LIO =$  \_\_\_\_\_  
 $\angle ION =$  \_\_\_\_\_

2. 

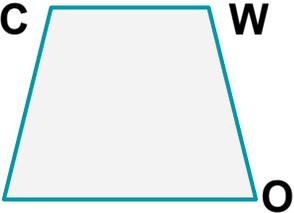
$\angle OWL =$  \_\_\_\_\_  
 $\angle LOW =$  \_\_\_\_\_

3. 

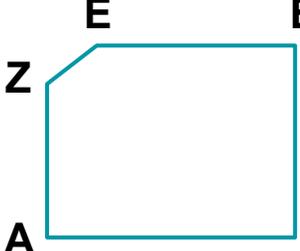
$\angle REG =$  \_\_\_\_\_  
 $\angle RTI =$  \_\_\_\_\_

4. 

$\angle FOX =$  \_\_\_\_\_  
 $\angle XOF =$  \_\_\_\_\_

5. 

$\angle RCW =$  \_\_\_\_\_  
 $\angle WOR =$  \_\_\_\_\_

6. 

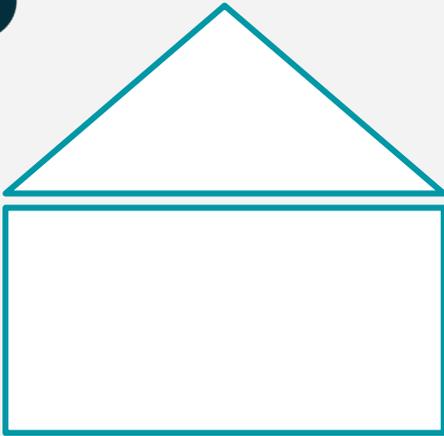
$\angle ZAR =$  \_\_\_\_\_  
 $\angle ARB =$  \_\_\_\_\_



# BEAUTIFUL TRACES

G4  
Basic

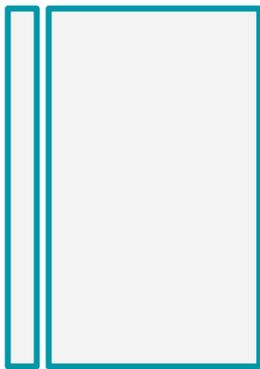
The animals in the safari left artistic traces on the sand. Identify the how many right angles are there in the images below.



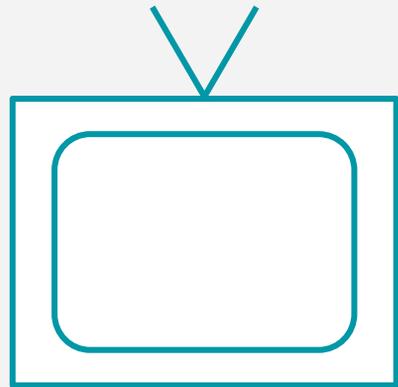
1. \_\_\_\_\_ right angles



2. \_\_\_\_\_ right angles



3. \_\_\_\_\_ right angles



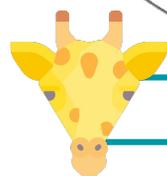
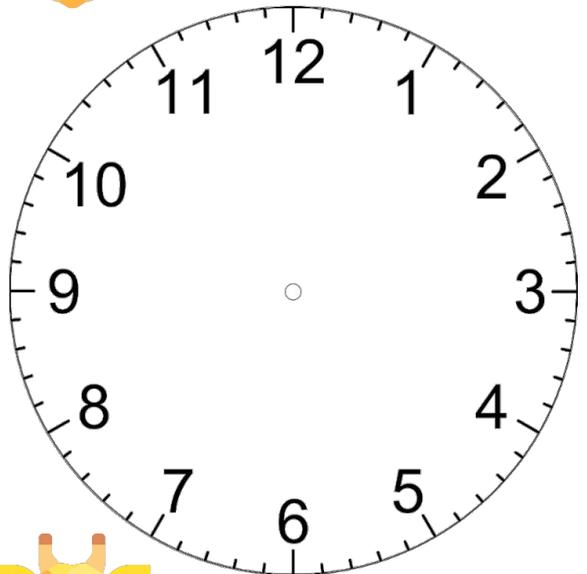
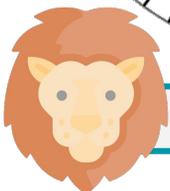
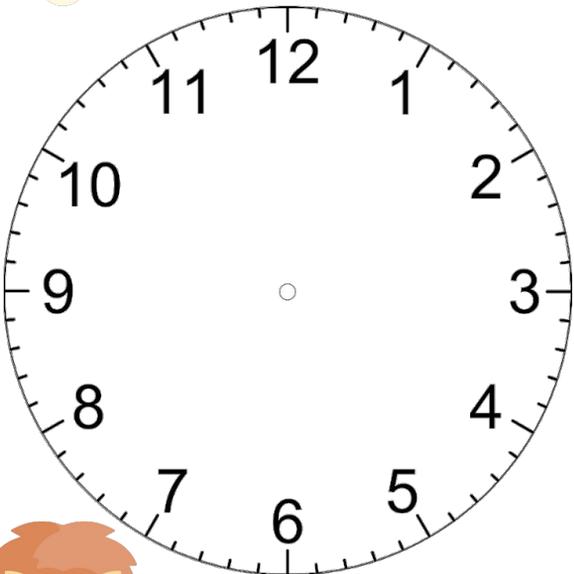
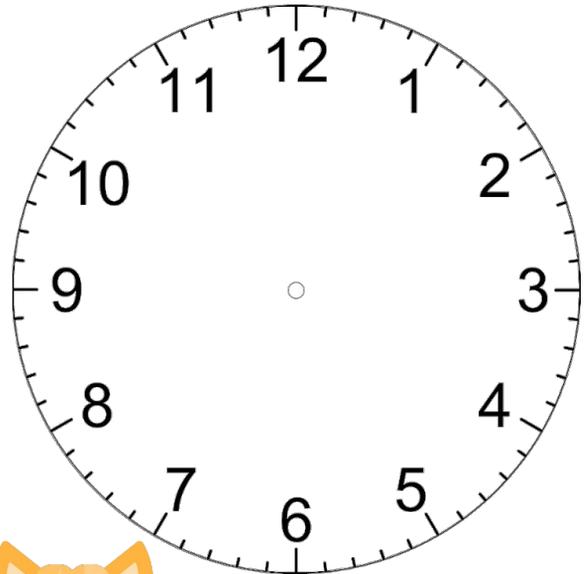
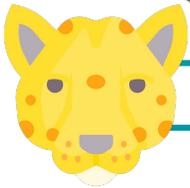
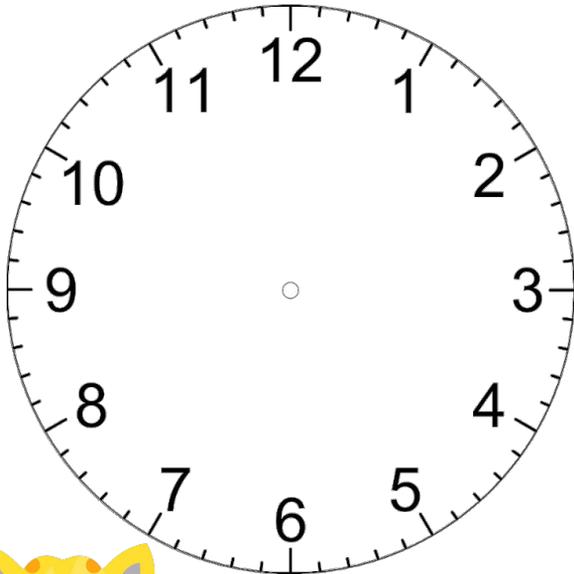
4. \_\_\_\_\_ right angles



# WHAT TIME IS IT?

G4  
Basic

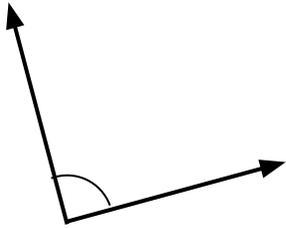
Times flies so fast when you are in the safari. Draw the hands of the clocks below that will show right angles. Identify the time being shown in the clock after.



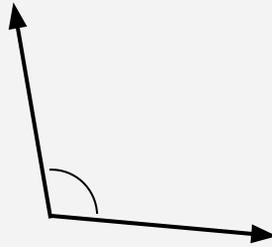
# WE NEED A BRIDGE

G4  
Basic

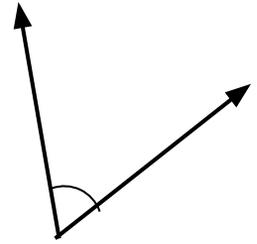
Oh no! The deer lost his way and was trapped at the other side of the river. Help the deer cross the river safely and get back to his friends by identifying if the following figures are 'less than'  $90^\circ$ , 'greater than'  $90^\circ$  or 'equal'.



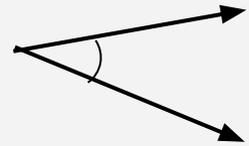
1. \_\_\_\_\_



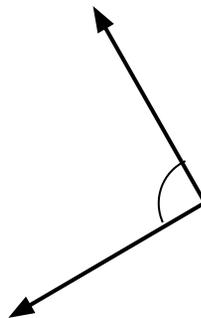
2. \_\_\_\_\_



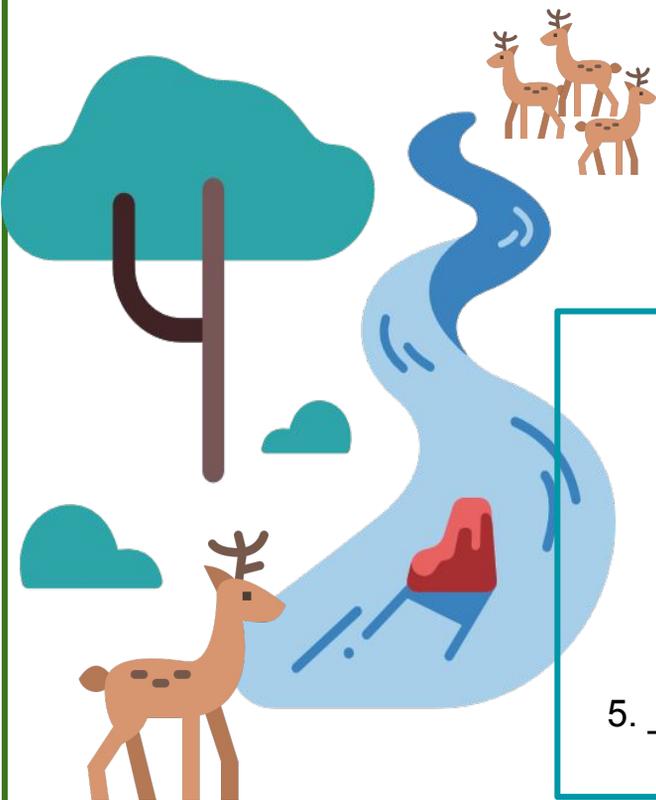
3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_



# HOW MANY TURNS?

G5  
Advanced

It is nice to go on tours in the safari once in a while. Answer the questions below and let them know the number of turns they need to make.

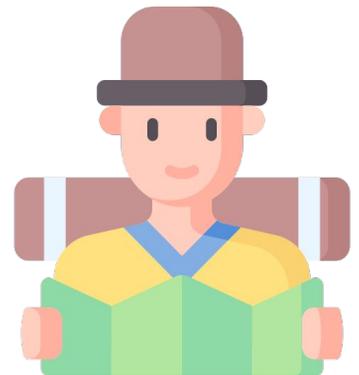


I managed to clean the  $90^\circ$  of the lion's den. How many turns should I make to clean until  $180^\circ$  of the den?

\_\_\_\_\_

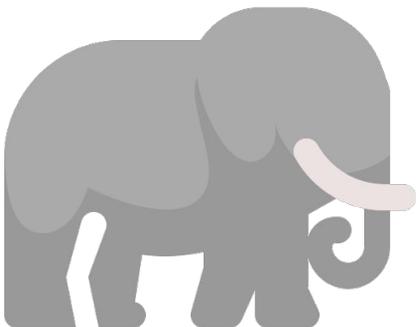
I have visited  $90^\circ$  of this man-made safari. How many more turns should I do to finish  $360^\circ$  of the tour?

\_\_\_\_\_



I am familiarizing myself with my new place. How many turns should I make for a  $90^\circ$  turn?

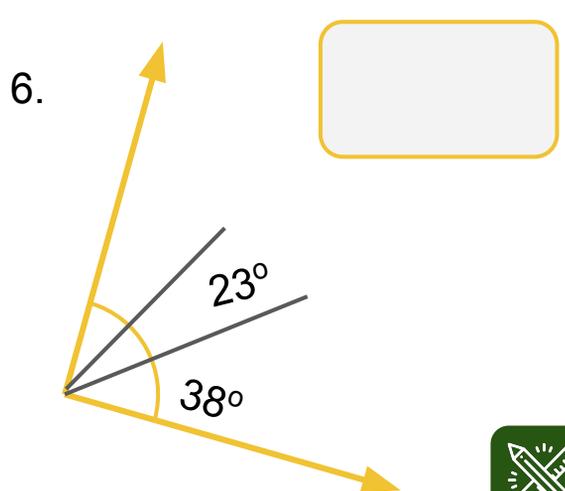
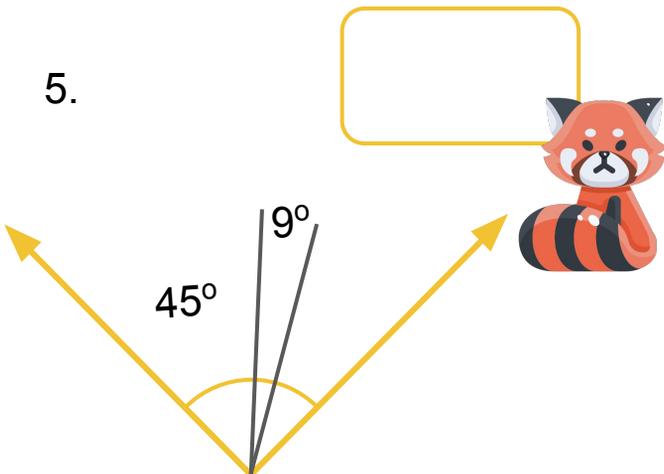
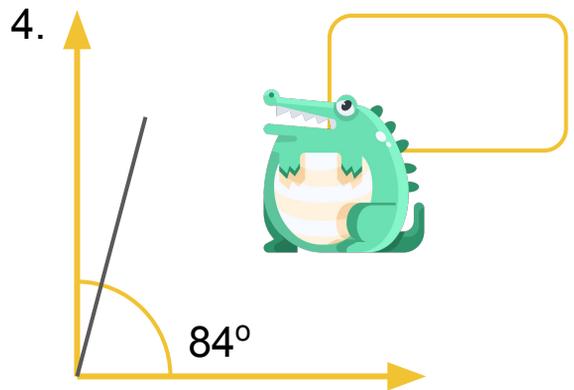
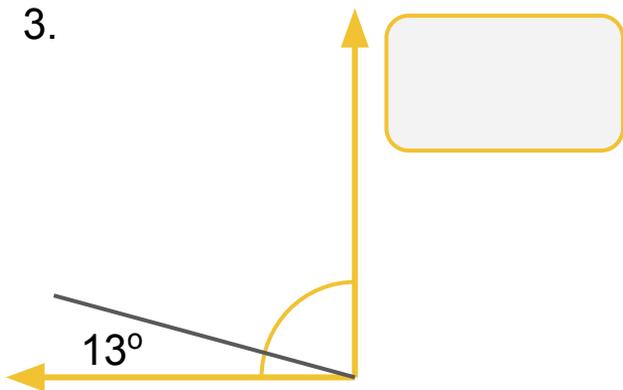
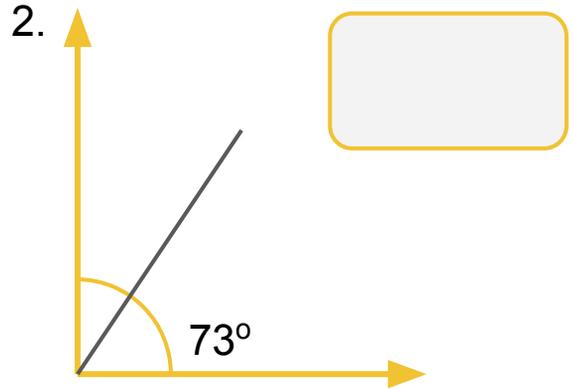
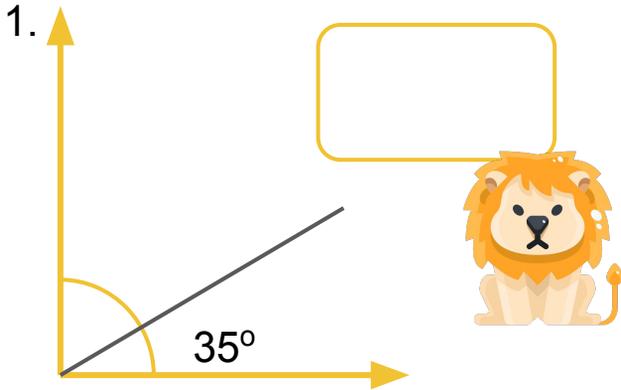
\_\_\_\_\_



# OWN PLACES

G5  
Advanced

The safari has been divided for the animals to have their own places. Identify the missing measures below to complete the right angle.



# HELP THE CUB

G5  
Advanced

The tiger cub was frightened by the sudden roar of his mom. Help the tiger cub go down the tree by answering the questions below.



1. The given angle is  $37^\circ$ , what is the measurement of the missing angle?

\_\_\_\_\_

2. If the given angle is  $28^\circ$ , what measurement is need to complete a right angle?

\_\_\_\_\_

4. \_\_\_\_\_ will complete a right angle with the given angles,  $13^\circ$  and  $49^\circ$ .

3. To complete a right angle, the measurements should be,  $25^\circ$ ,  $27^\circ$ , and \_\_\_\_\_.



# SAFARI TOUR

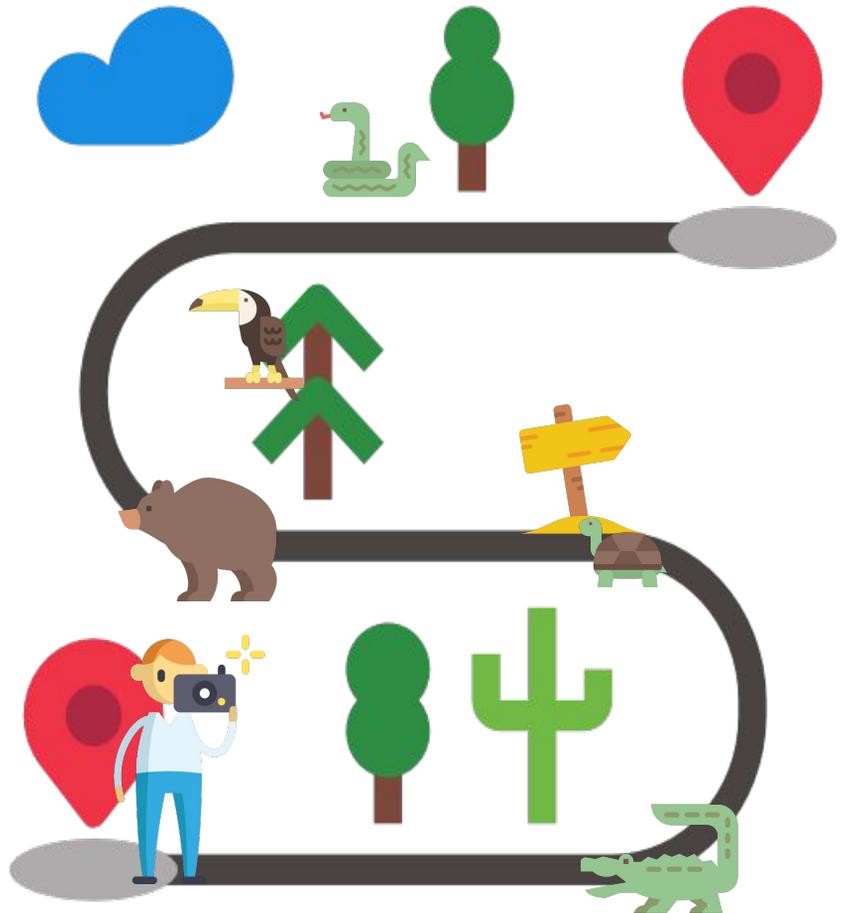
G5  
Advanced

Steven visited the safari today. Guide him along the path by drawing right angles based on the given descriptions below. Include the missing angle too.

1. Draw a right angle with given measures of  $10^\circ$  and  $29^\circ$ .



2. Draw a right angle with a given measure of  $37^\circ$ .



3. Draw a right angle with three equal parts.



# DRAW FOR CALEB

G5  
Advanced

Caleb, the lion, got curious about right angles. Draw 5 right angles that are present in our day-to-day lives.



They say that right angles are everywhere. Can you draw for me 5 everyday items with right angles?

A large, empty rounded rectangular box with a yellow border, intended for drawing.A large, empty rounded rectangular box with a yellow border, intended for drawing.A large, empty rounded rectangular box with a yellow border, intended for drawing.A large, empty rounded rectangular box with a yellow border, intended for drawing.A large, empty rounded rectangular box with a yellow border, intended for drawing.

# ANSWER GUIDE

## Activity 1

1. 6 sides; 5 right angles
2. 12 sides; 8 right angles
3. 4 sides; 2 right angles
4. 5 sides; 2 right angles

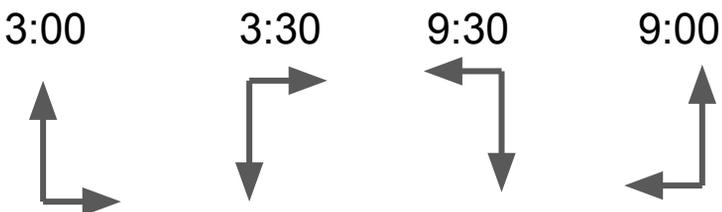
## Activity 2

1.  $\angle LIO =$  right angle  
 $\angle ION =$  right angle
2.  $\angle OWL =$  acute angle  
 $\angle LOW =$  acute angle
3.  $\angle REG =$  obtuse angle  
 $\angle RTI =$  right angle
4.  $\angle FOX =$  right angle  
 $\angle XOF =$  right angle
5.  $\angle RCW =$  obtuse angle  
 $\angle WOR =$  acute angle
6.  $\angle ZAR =$  right angle  
 $\angle ARB =$  right angle

## Activity 3

1. 4
2. 5
3. 8
4. 4

## Activity 4



*\*There can still be other answers based on the position of the hour and minute hand.*

## Activity 5

1. Equal
2. Greater than
3. Less than
4. Less than
5. Equal



# ANSWER GUIDE

## Activity 6

1. 1 turn                      2. 3 turns                      3. 1 turn

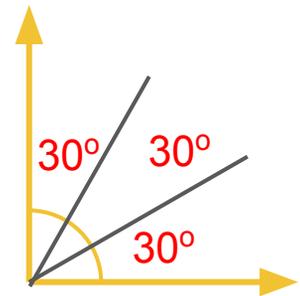
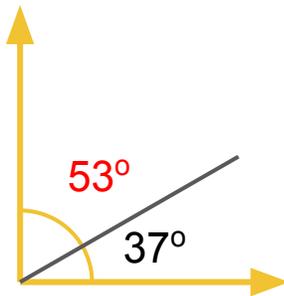
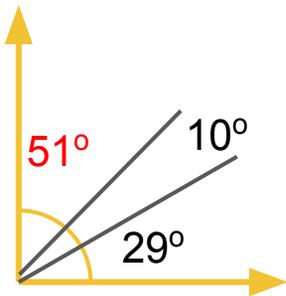
## Activity 7

1.  $55^\circ$                       4.  $6^\circ$   
2.  $17^\circ$                       5.  $36^\circ$   
3.  $77^\circ$                       6.  $29^\circ$

## Activity 8

1.  $57^\circ$                       2.  $62^\circ$                       3.  $38^\circ$                       4.  $28^\circ$

## Activity 9



## Activity 10

1. Television                      4. Door  
2. Road intersection                      5. Hands of clock  
3. Picture frame

*\*Answers may still vary*



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