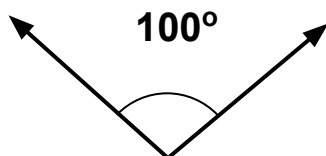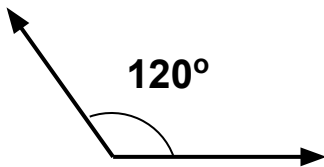# Helping With Math

USA GRADES

Obtuse 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 obtuse angles.

Let's find out about Obtuse Angles here!

120°

- 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.

100°

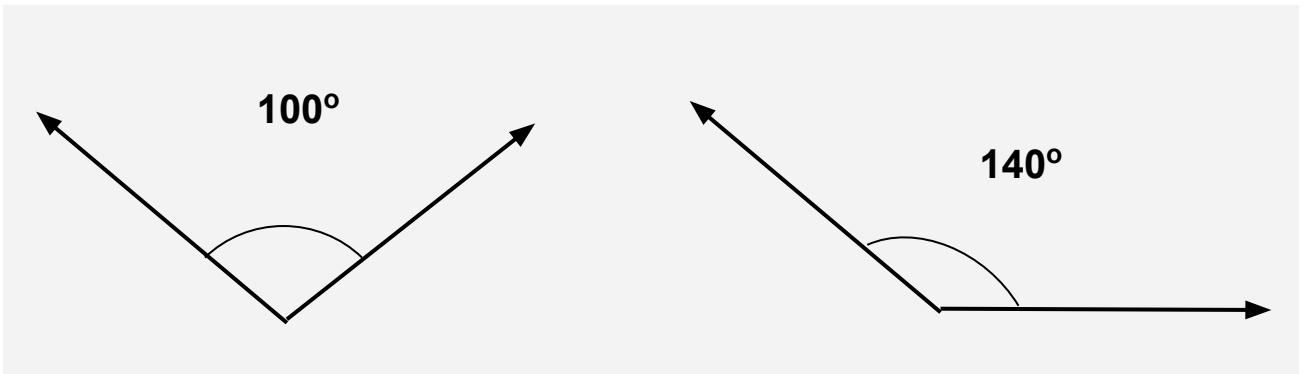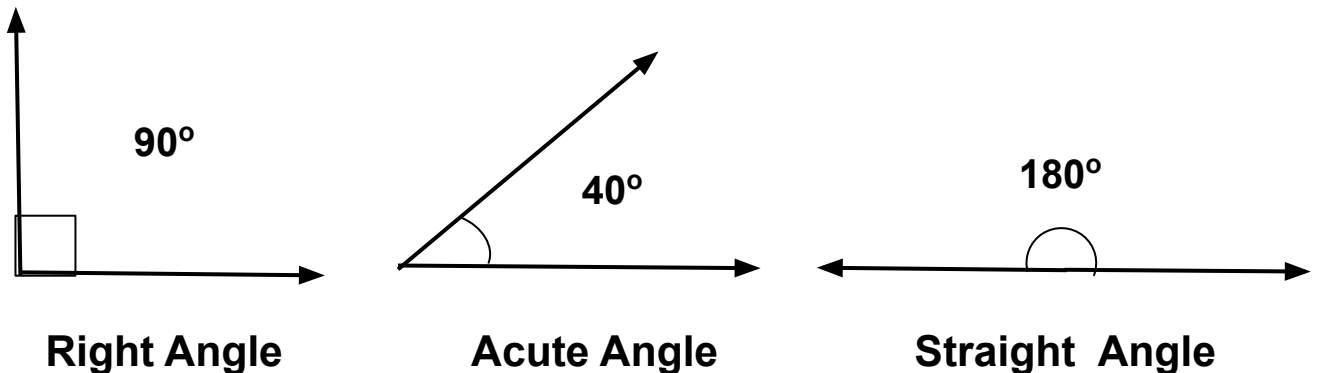- Obtuse angle is the type of angle that measures more than 90° but less than 180°.

Obtuse Angles
- These are angles that measures more than 90º but less than 180º.

120º
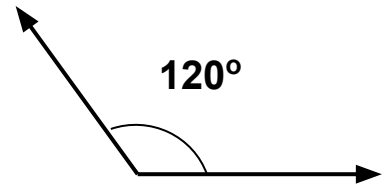
Here are some examples of Obtuse Angles:

100º

140º

Here are some examples of angles which are not Obtuse Angles:

90º

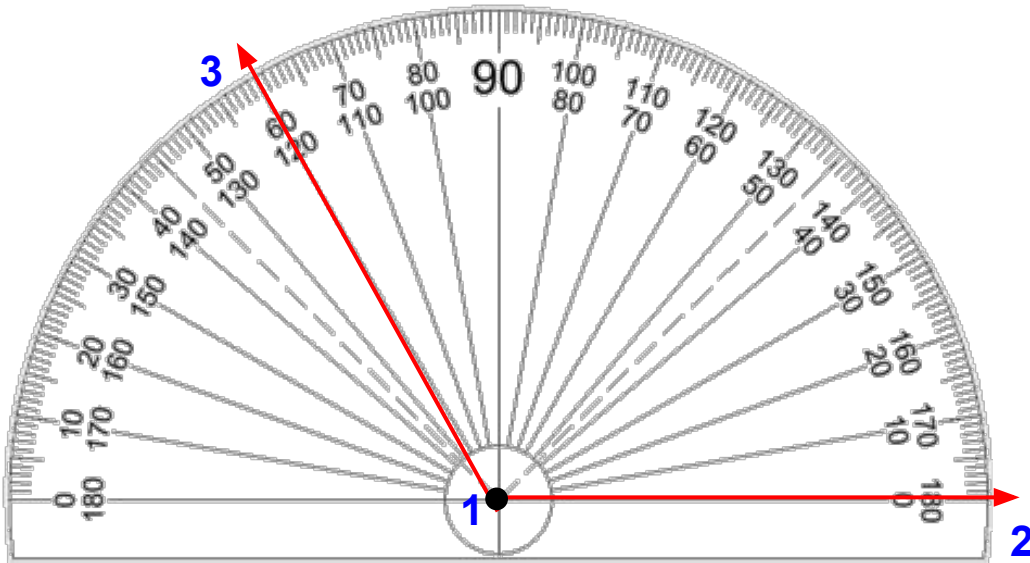**40º**

180º

Right Angle   **Acute Angle**   **Straight Angle**

To accurately measure the angles, a protractor is a good tool that you may use. A protractor is a flat semi-circle instrument marked with degrees along its curve.
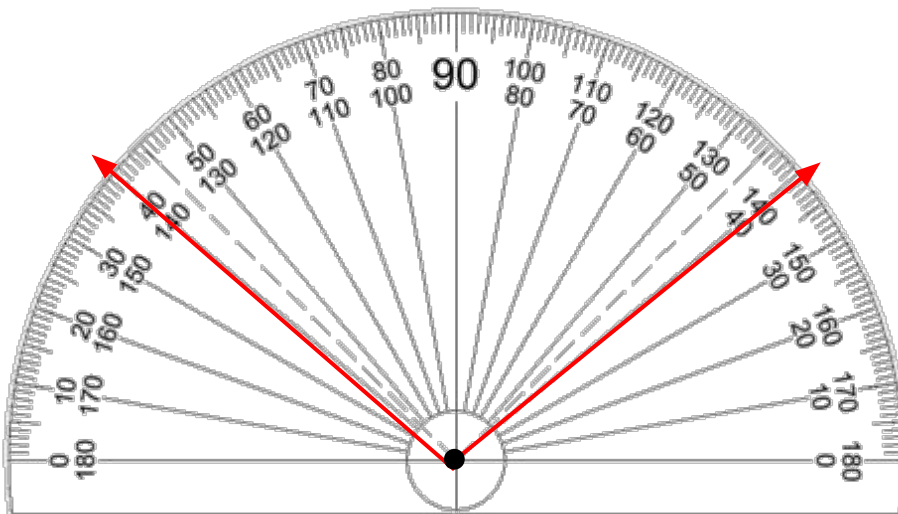
MEASURING USING A PROTRACTOR

This is a 120° angle based on the protractor.

1. Place the vertex of the angle in the middle of the protractor.

2. One of its arm should lie along 0°.

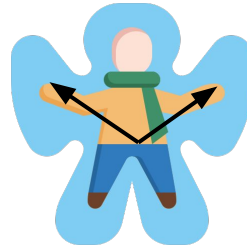3. Count the measurement of the angle starting from 0°, until it reaches the position of the other arm.
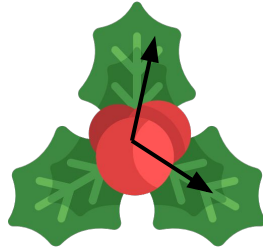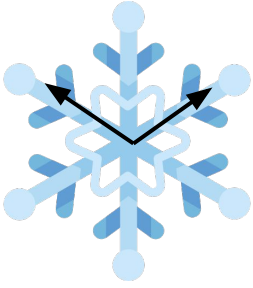

If both arms won't fall on the baseline of the protractor, subtract the given degree measures of one arm to the other.

In this case, subtract 140° or 40° with 40° or 140°, respectively. Ether ways, the measurement of this angle is 100°.

REAL LIFE OBTUSE ANGLES

LET'S PRACTICE!

Explain how to use a protractor to measure an obtuse angle.
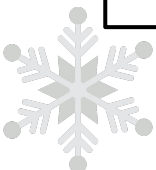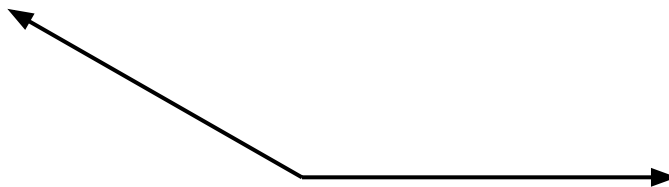
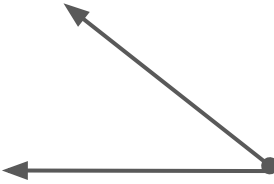Try to measure the obtuse angle.

TABLE OF ACTIVITIES
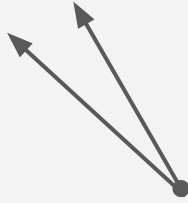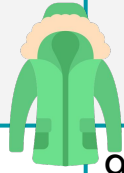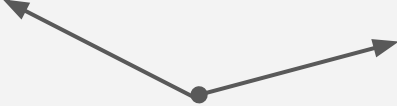
Ages 8-9 (Basic)		4th Grade
1	Winter Clothes	
2	The Perfect Jump	
3	Ski Long Jump	
4	It's Snowing Angles	
5	The Athletes	
Ages 9-10 (Advanced)		5th Grade
6	Winning Shot	
7	Christmas List	
8	Winter Activities	
9	Figure Skating	
10	Save the Snowman	

WINTER CLOTHES

Winter season is coming early this year. Complete your collection of Winter clothes as you complete the table below. You may use a protractor to help you with this activity.
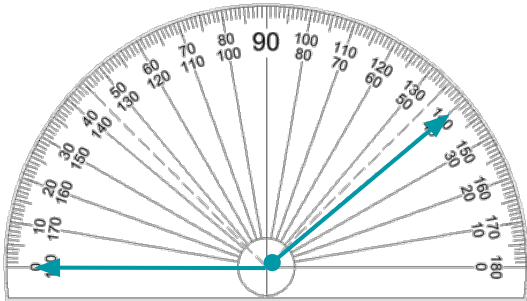
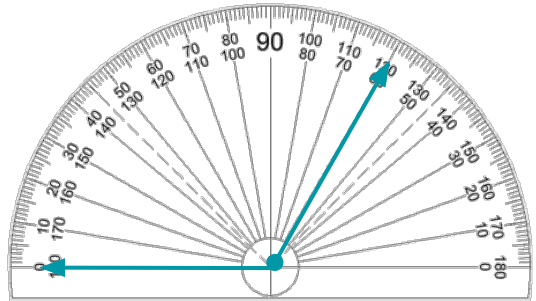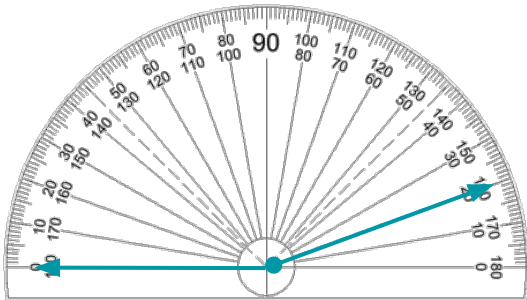| ANGLE	MEASUREMENT	TYPE
	1.	ACUTE
	2.	3.
4.	120°	5.
	6.	7.
8.	145°	9.
	10.	OBTUSE

THE PERFECT JUMP

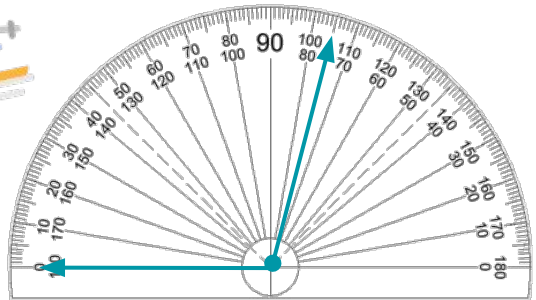James is practicing for the ski long jump competition. Help him measure the size of each obtuse angles to perfect the jump.

1. _____

2. _____
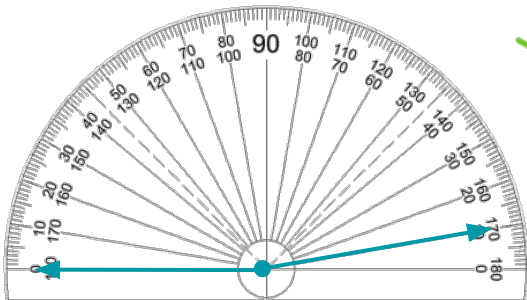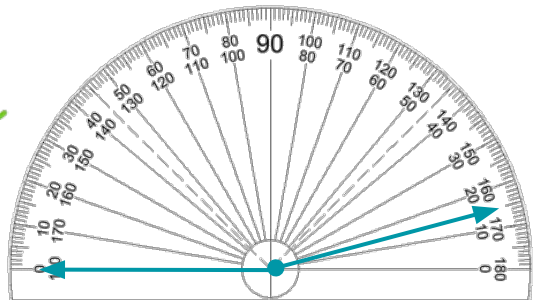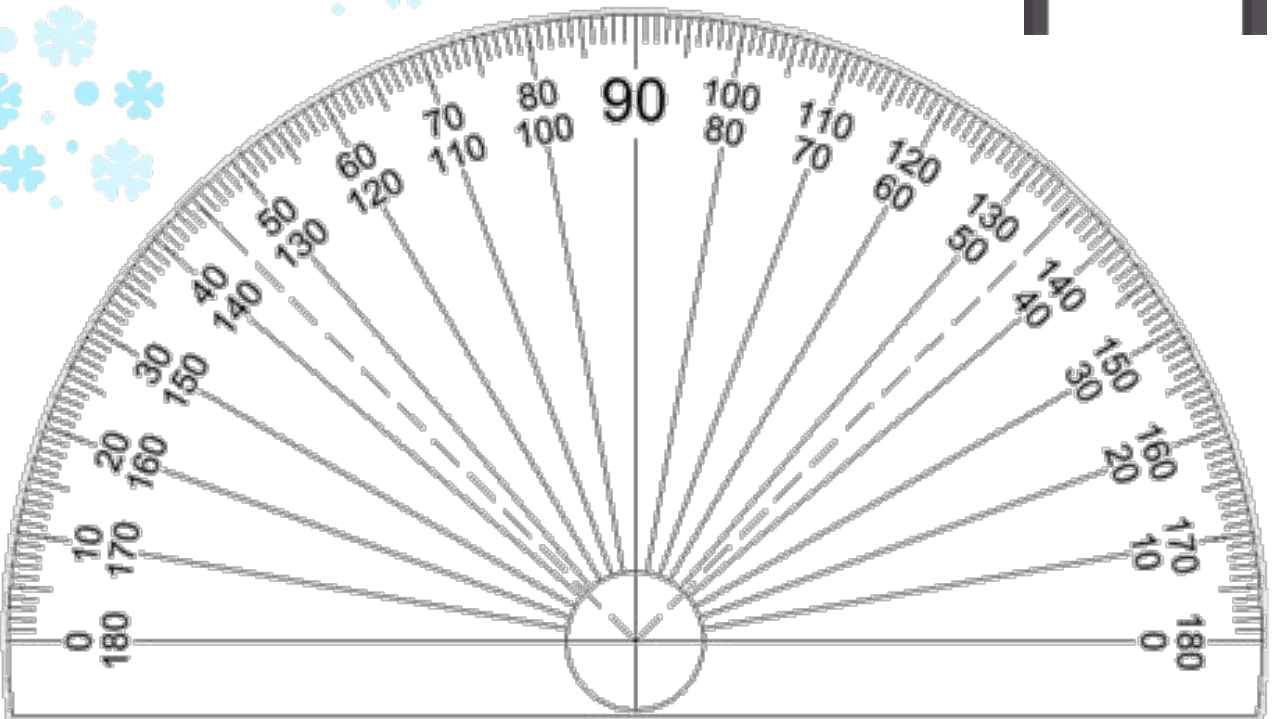
3. _____

4. _____

5. _____

6. _____

SKI LONG JUMP

Marty just joined the annual ski long jump competition. Help Marty plot the given angles to reach the finish line. Please label the angles too.

FINISH

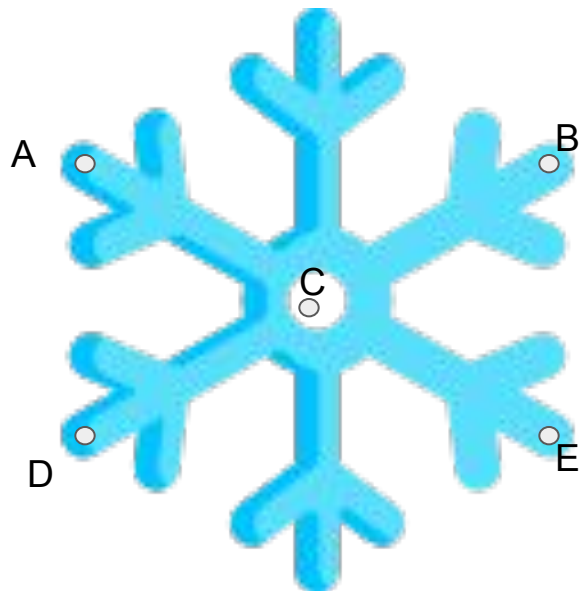Hi there! Let's help Marty plot these angles.
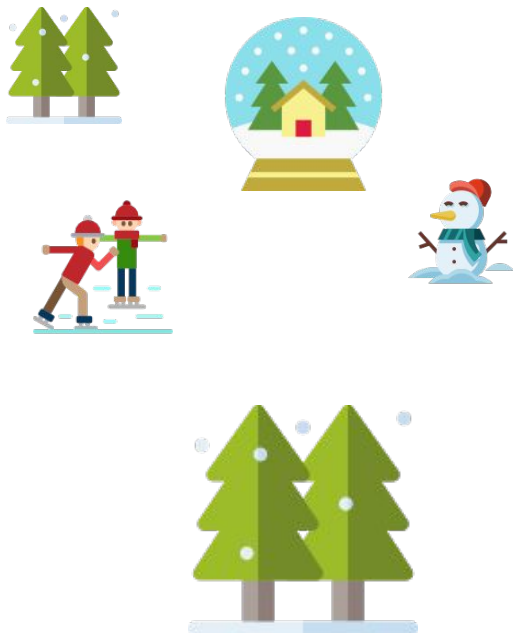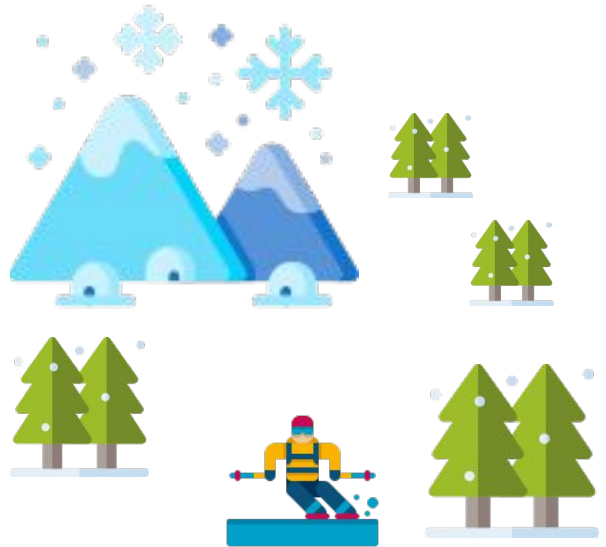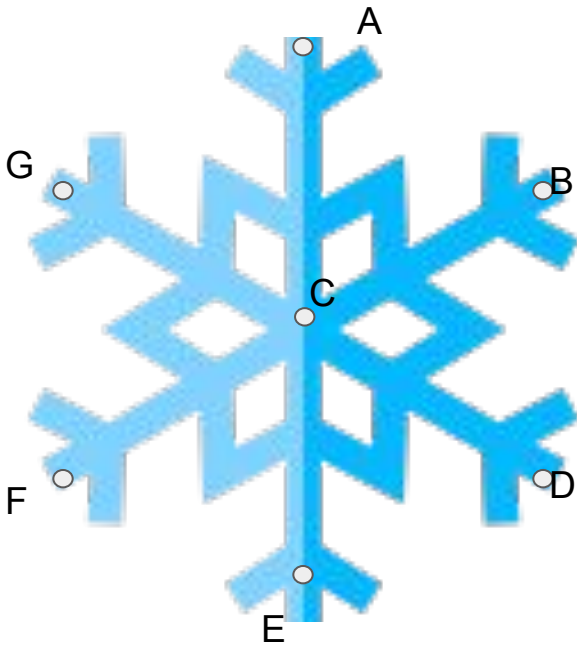
1. 170º
2. 145 º
3. 110º

IT'S SNOWING ANGLES

Lily and Bien are fond of looking at snowflakes. Find the obtuse angles in the snowflakes by drawing lines from one point to another. You may use a protractor to help you with this activity.

A

G

B

C

F

D

E

A

B

C
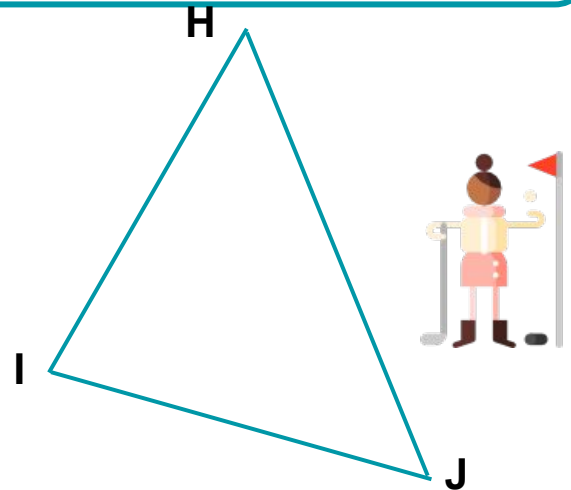
D

E

The players for each competitions are already in their spots. As their warm up, they must identify the types of the angles given below. Can you help them? You may use a protractor to help you with this activity.
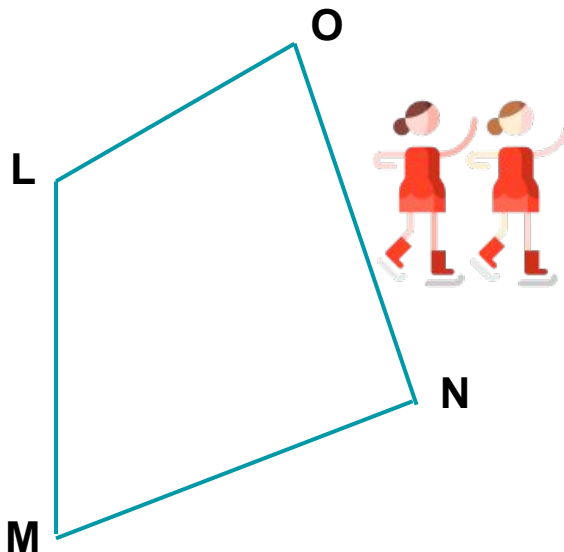
Q   R

T   S

H

I

J
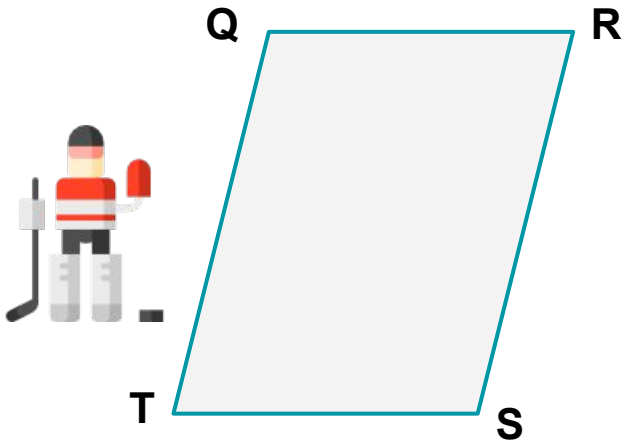
1. ∠TQR =

2. ∠TSR =

3. ∠IJH =

4. ∠JIH =

O

L

N

M

A

E   B

D   C

5. ∠MNO =

6. ∠LMN =
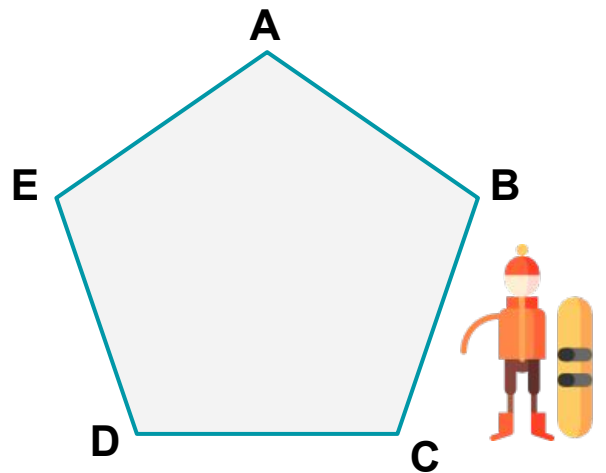
7. ∠CDE =

8. ∠ABC =

WINNING SHOT

It is Penny's time to win the conference championship. Find the correct measurement to score the championship goal. You may use a protractor to help you with this activity.
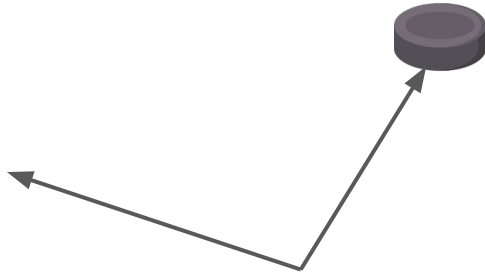
1. _____

2. _____

3. _____

4. _____

5. _____

CHRISTMAS LIST

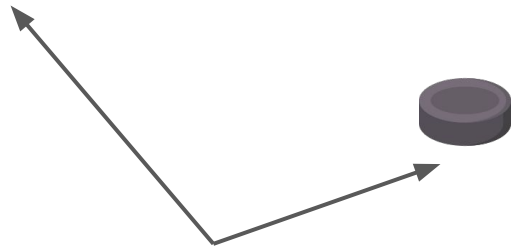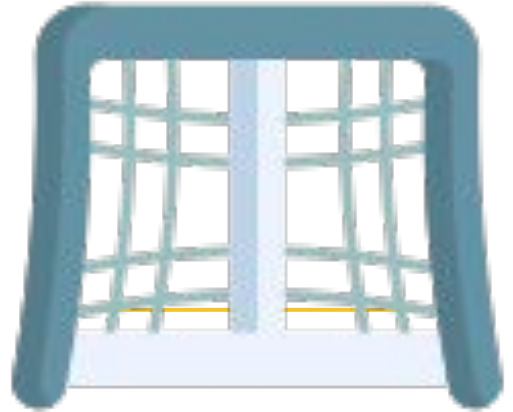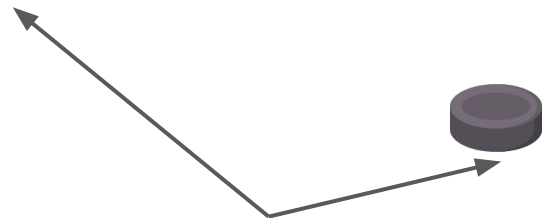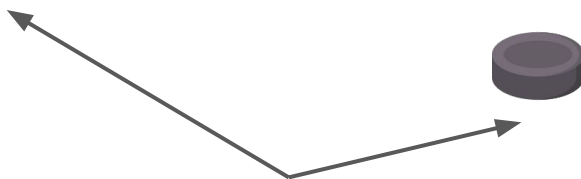**Christmas is just around the corner. Find the perfect gift for your loved ones by identifying if the statements below are true or false. Don't forget to state your reasons.**

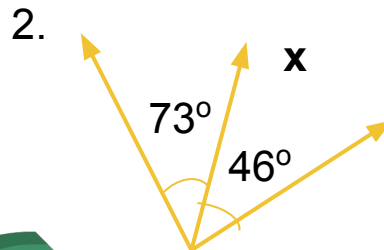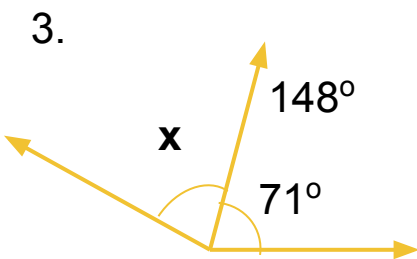| STATEMENT	TRUE OR FALSE	REASONING
One of its arm should lie along 5°.		
Obtuse angle is the type of angle that measures more than 90° but less than 180°.		
If both arms won't fall on the baseline of the protractor, subtract the given degree measures of one arm to the other.		
Place the vertex of the angle in the leftmost part of the protractor.		

WINTER ACTIVITIES

Zac is enjoying different winter activities, but he feels that something is missing. Find the missing values in the angles below to help Zac enjoy winter.
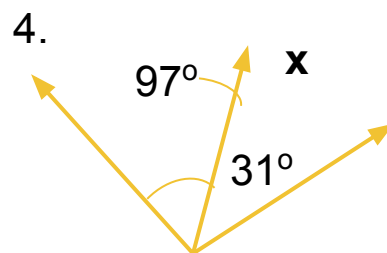
1.
127º
x
47º

x =

2.
73º
x
46º

x =

3.
148º
x
71º

x =

4.
97º
x
31º

x =

5.
167º
x
114º

x =

6.
101º 31º
x

x =
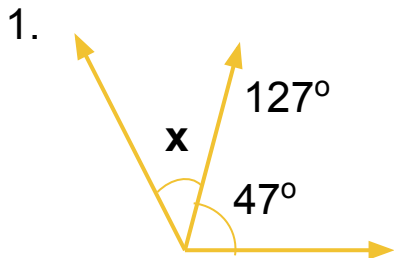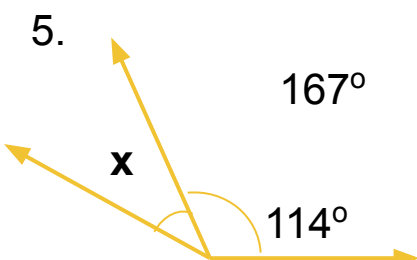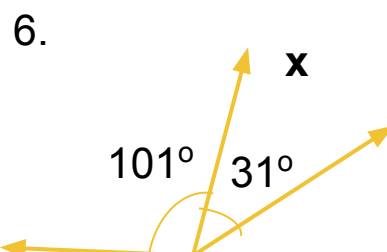
Timmy and Lia needs a winning combination move. Draw the given obtuse angles to give them ideas for their final performance. You may use a protractor to help you with this activity.

1. Draw a 170º obtuse angle.

2. Draw a 130º obtuse angle.

3. Draw a 95º obtuse angle.

4. Draw a 100º obtuse angle.

SAVE THE SNOWMAN
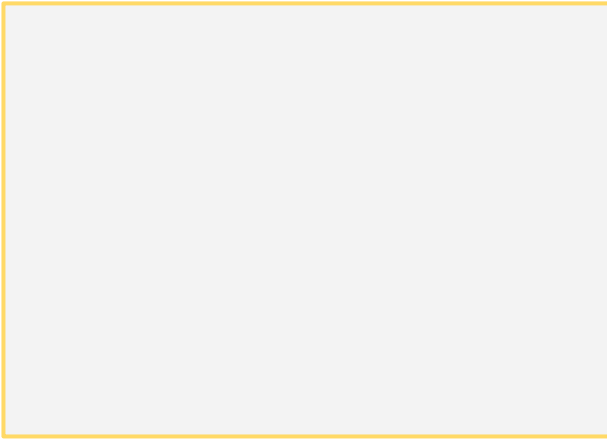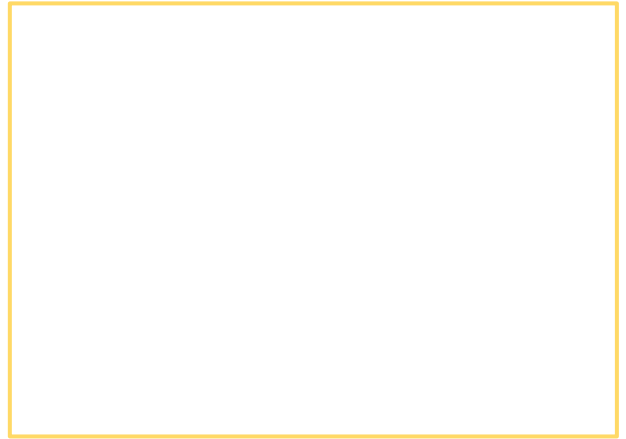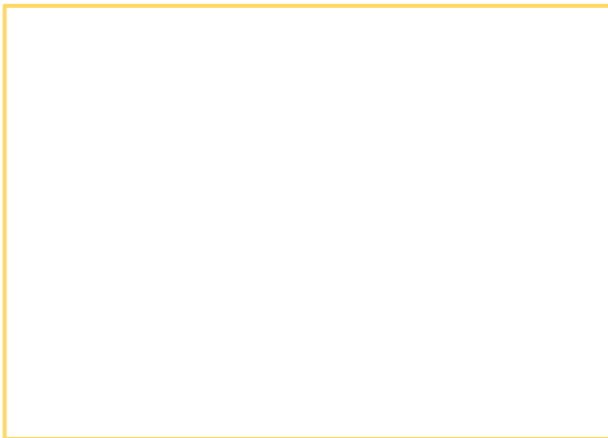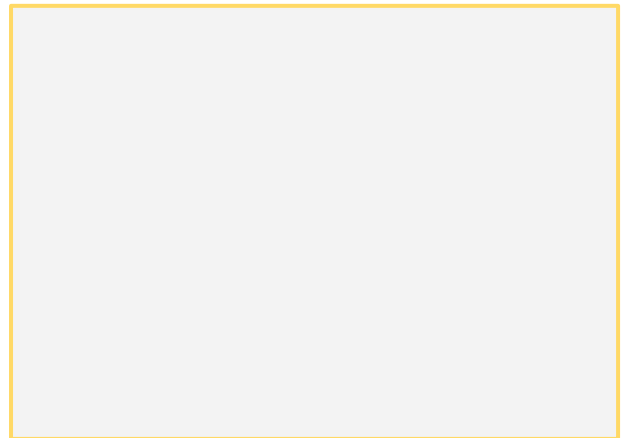
The end of the Winter season is about to come and the snow is starting to melt. Save the snowman for a few more days by providing answers for the questions below.

1. An obtuse angle measured at 165º is divided into two parts. First part is measured at 78º. What is the measurement of the second part?

2. If a 135º obtuse angle is divided into three parts, 42º and 61º, what is the missing angle?

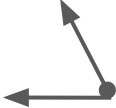3. If a 151º obtuse angle is divided into three parts, 57º and 56º, what is the missing angle?

4. An obtuse angle measured at 128º is divided into two parts. First part is measured at 39º. What is the measurement of the second part?

I am about to melt! Can you help me?
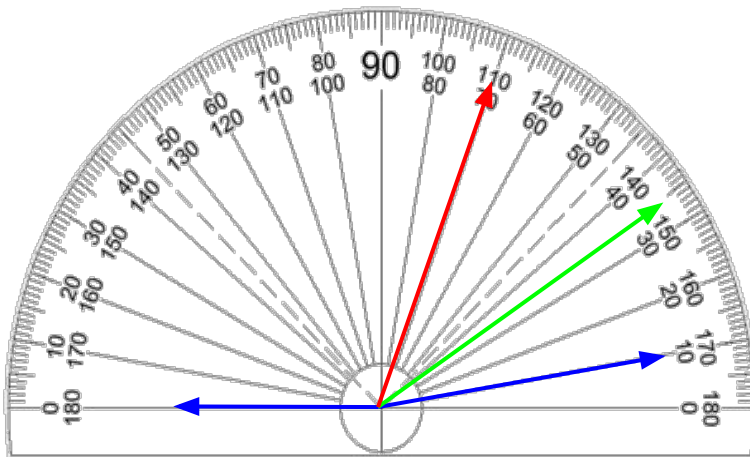
ANSWER GUIDE

Activity 1

1. 40º
2. 10º
3. ACUTE
4. OBTUSE
5.

6. 20º
7. ACUTE
8.
9. OBTUSE

10. 130º

Activity 2

1. 140º 2. 120º 3. 160º 4. 105º 5. 170º 6. 165º

Activity 3

1
2
3

ANSWER GUIDE

Activity 4

Figure 1: ∠ACD, ∠BCE, ∠DCF, ∠ECG, ∠ACF, ∠GCB
Figure 2: ∠ACB, ∠DCE

Activity 5

1. Obtuse
2. Obtuse
3. Acute
4. Acute
5. Right
6. Acute
7. Obtuse
8. Obtuse

Activity 6

1. 100º
2. 110º
3. 130º
4. 140º
5. 160º

Activity 7

1. False - One of the arms of the angles must lie along 0º
2. True - All obtuse angles are measured at more 90º and less than 180º.
3. True - To get the measurement of angle that doesn't fall on 0º, you may need to subtract the measurements of one arm to the other.
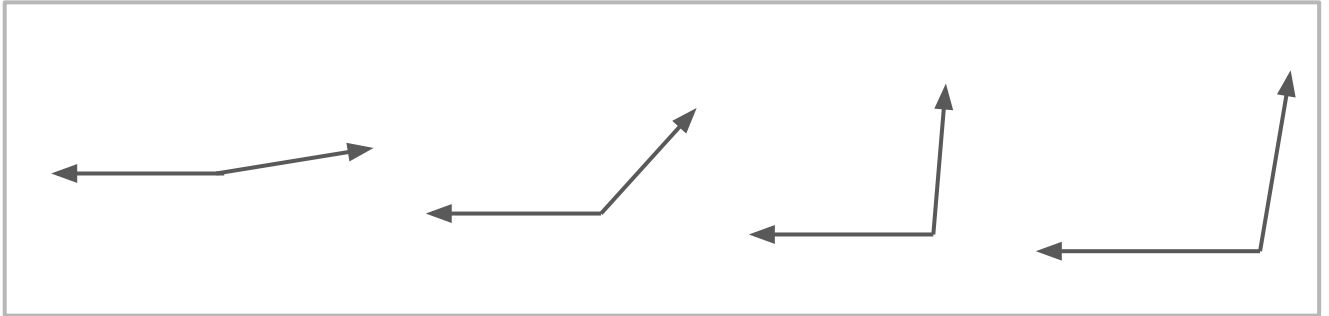4. False - The vertex of the angle must be placed in the middle of the protractor.

ANSWER GUIDE

Activity 8

1. 80º   2. 119º   3. 77º   4. 128º   5. 53º   6. 132º

Activity 9

Activity 10

1. 87º   2. 32º   3. 38º   4. 89º

Copyright Notice

Thank you

Thank you so much for purchasing and downloading this resource.

We hope it has been useful for you in the classroom and that your students enjoy the activities.

For more teaching and homeschooling resources like this, don't forget to [come back](#) and download the new material we add every week!

Thanks for supporting **Helping With Math**. We can provide teachers with low-cost, high-quality teaching and homeschooling resources because of our loyal subscribers and hope to serve you for many years to come.

- The Entire Helping With Math Team :)