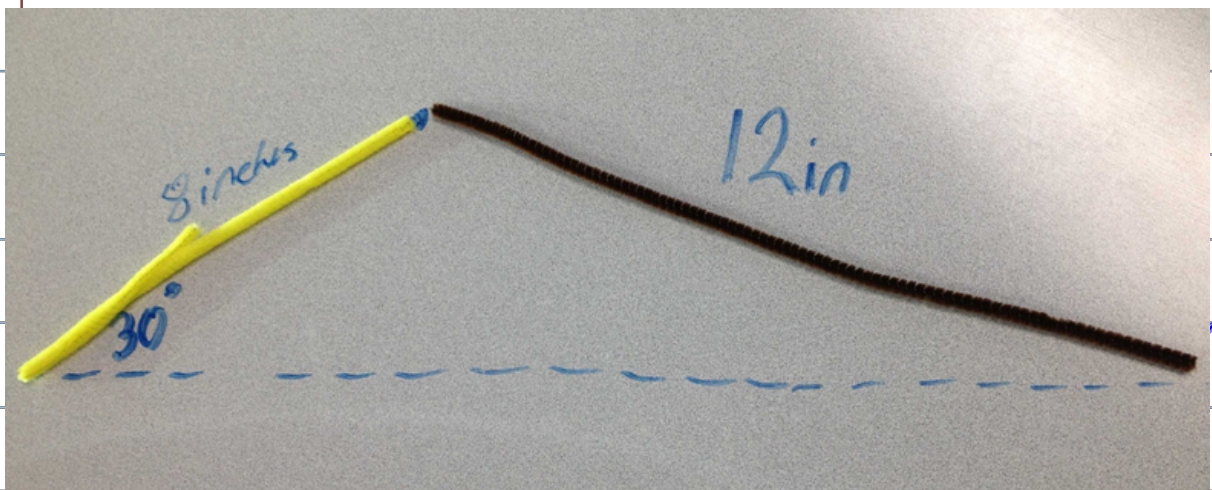


Triangle Challenge

1. Use one pipe cleaner that is 8 inches long (light colored) and put it as side \overline{AB}
2. Angle A is exactly 30 degrees.
3. Side \overline{AC} is a second pipe cleaner (darker color) and starts at 12 inches long. It can be shortened by 1 inch increments.

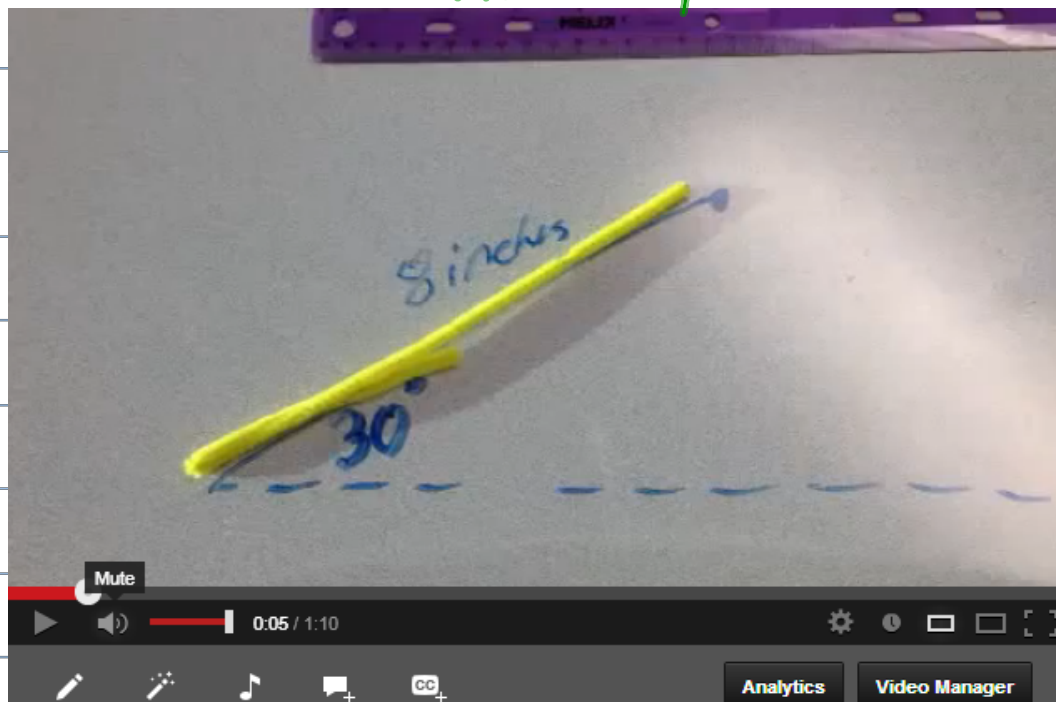
Objective: Use the pipe cleaners to create as many triangles as possible.



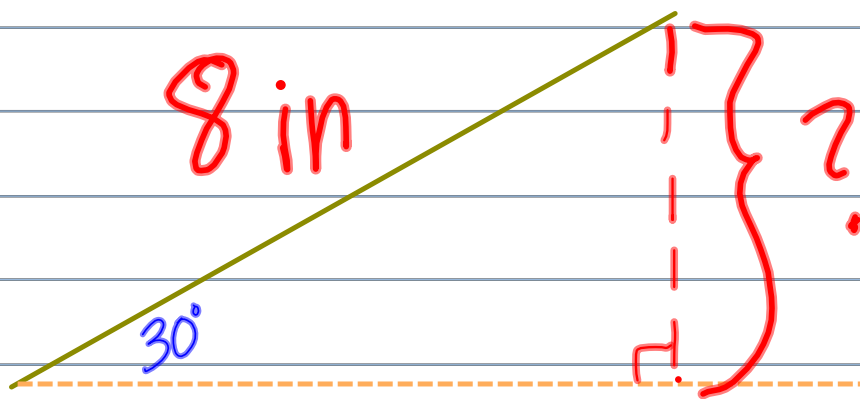
Triangle Challenge

Objective: Use the pipe cleaners to create as many triangles as possible.

watch the video explanation



Making a 30 degree angle



Use $\sin 30^\circ$

Triangle Challenge

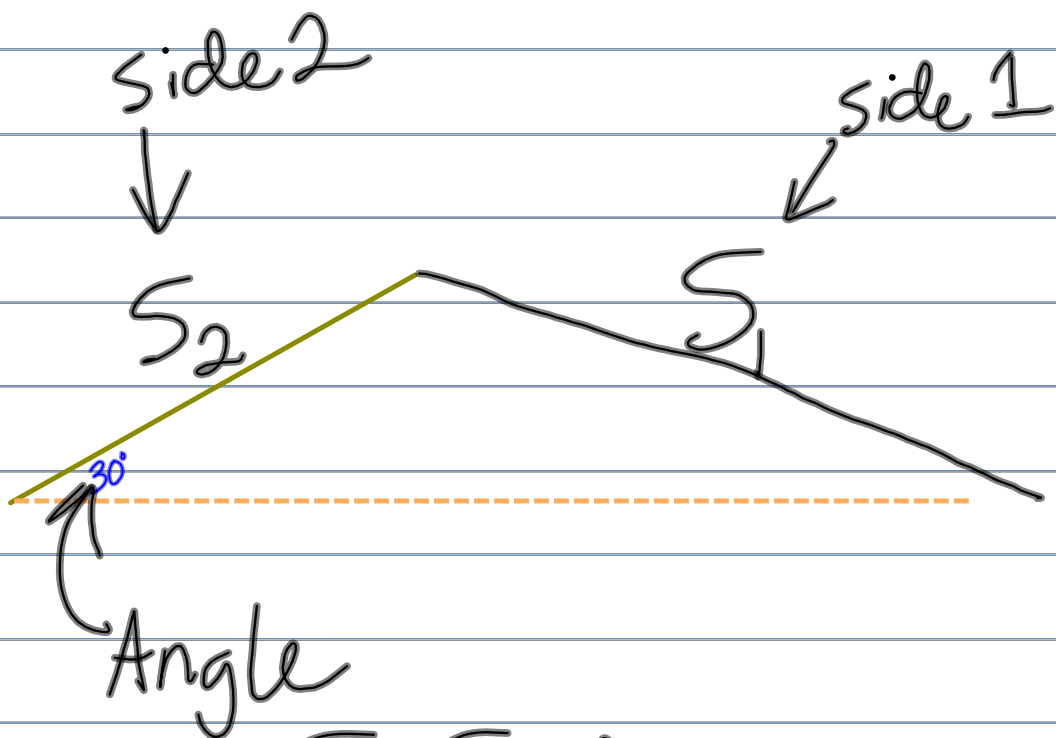
Objective: Use the pipe cleaners to create as many triangles as possible.

Draw out each triangle possibility
there are more than 10

Example



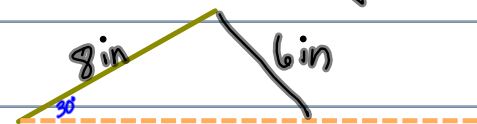
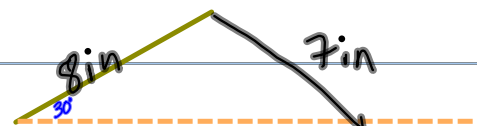
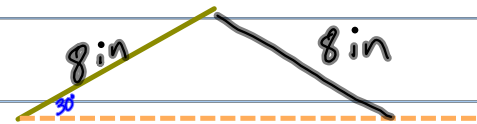
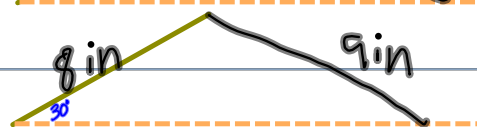
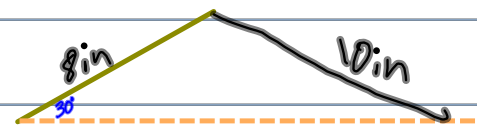
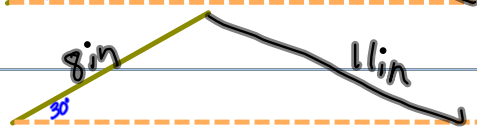
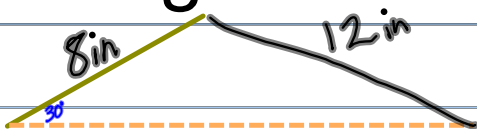
Triangle Challenge



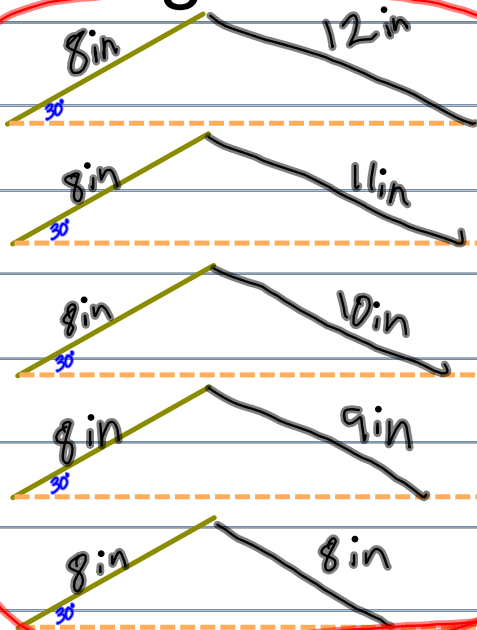
SSA

Triangle Challenge Solution

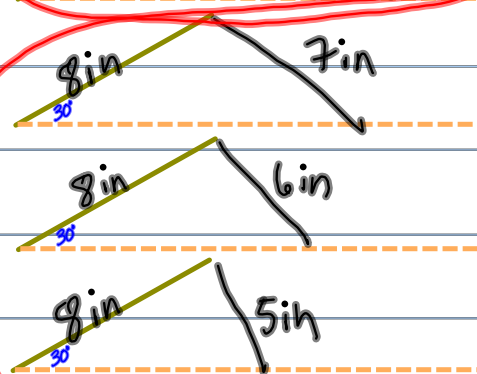
12 Δ 's



Triangle Challenge



12 Δ 's Key
 $S_1 > S_2$ $S_1 < S_2$
 1 Δ 8 in | 4 in $S_1 = h$



$S_1 < S_2$ 2 Δ
 $S_1 > h$

Three triangles are shown, each with a 30-degree angle and a side of 8 inches. The other side lengths are 7 in, 6 in, and 5 in. The triangles are arranged vertically, with the 8 in side always adjacent to the 30-degree angle.

Triangle Challenge



[Finding some answers video](#)



[Solutions Video](#)

Brain Break

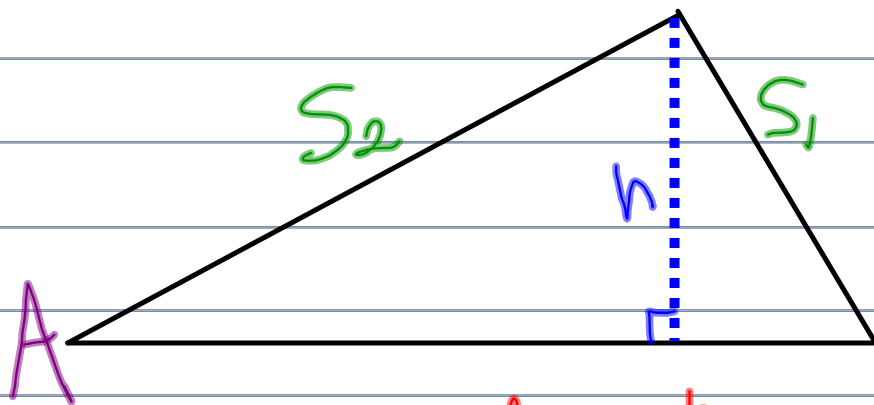


Hand Shake #2

partner

You will be doing a lengthy handshake with your partner.

1. Stand up and find a partner. Decide who is A and who is B.
2. Tap your right elbows together. Tap your left elbows together.
3. **Person A:** Give a crossing over low side five to your partner with your right hand. (right hand to right hand) Now do a fist bump with your right hand. (A fist bump is making a fist and lightly touching finger sections that are closest to the wrist) **Person B:** Give a crossing over low side five to your partner with your left hand and then do a fist bump with your left hand.
4. Bump your right shoulders together. Bump your left shoulders together.
5. **Person A:** Make an X in the air with your right arm over your left. **Person B:** Make an X in the air with your left arm over your right. Now while slapping each other's hands move them together back to their correct side.
6. Now do a double fist bump. (Opposite hands will be touching)
7. Repeat this handshake over and over as fast as you can.

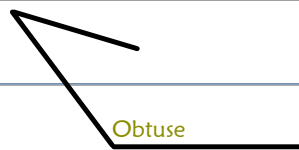
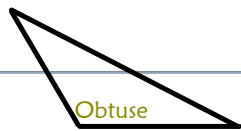


$$\sin A = \frac{h}{S_2}$$

$$(S_2) \sin A = h$$

Ambiguous Case SSA

Included Angle is Obtuse



Included Angle is Acute

