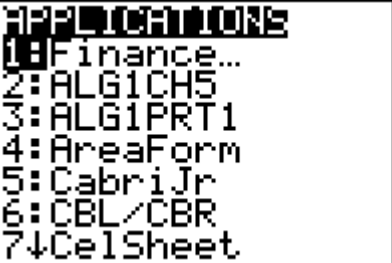
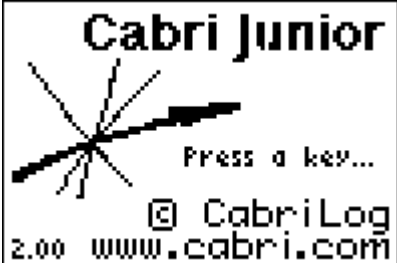

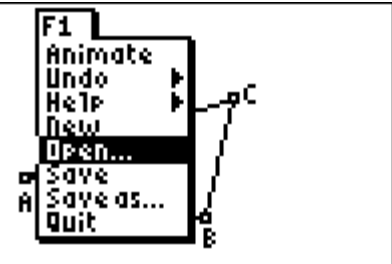
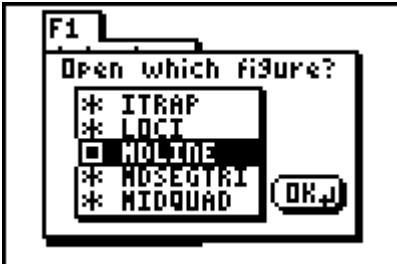
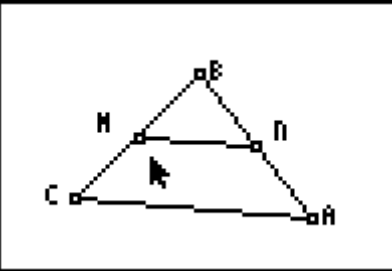


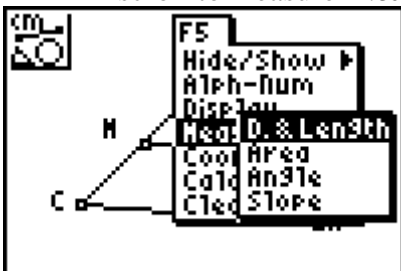
Student Worksheet for G.G. 42

<p>After turning on your handheld press</p> <p>APPS</p> 	<p>Select CabriJr.</p> <p>5</p> 
<p>Y=  scroll down to Open</p> 	<p>ENTER scroll to MDLINE</p> 
<p>ENTER</p> 	<p>M and N are the midpoints of sides BC and BA respectively</p> <p>You will be finding the lengths of segments and calculating ratios.</p> <p>The next page will review how to measure and calculate.</p>

Measuring the length of MN

GRAPH

scroll to measure D.&Length

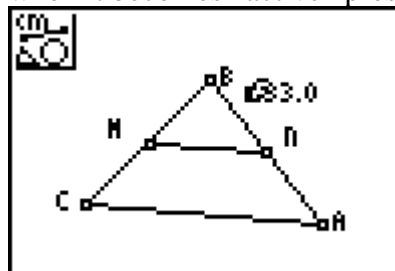


ENTER

Move the cursor to select segment MN

ENTER

when it becomes "active" press



Drag the measure to an open area and press

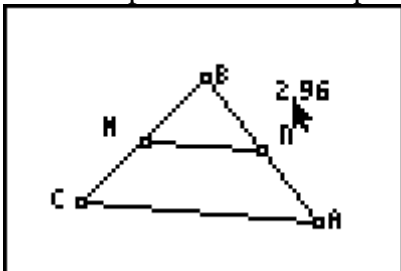
ENTER

CLEAR

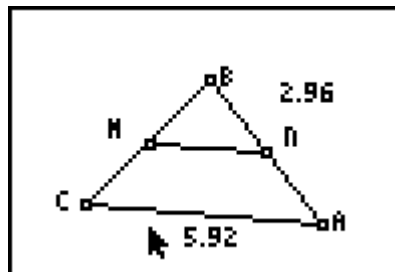
move the cursor over the measure

when the pointer is hollow press

+



This will give the measure to 2 decimal places.
Find the measure of AC to 2 decimal places.

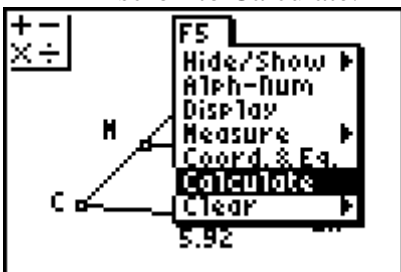


Make sure that only AC is "active" when you find its measure. If the entire triangle is "active" you measure the perimeter.

Next we will see how to use the calculate tool.

GRAPH

scroll to Calculate.

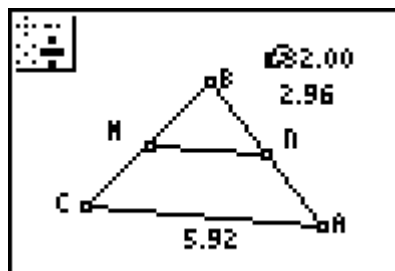


ENTER

Select the measure of AC, select the

measure of MN press

÷



You can now select, grab and drag the vertices and draw conclusions.

1) Select, grab and drag vertex A.

What is changing? _____

What is remaining the same? _____

2) Select, grab and drag vertex C.

What is changing? _____

What is remaining the same? _____

3) Select, grab and drag vertex B.

What is changing? _____

What is remaining the same? _____

Constructing a midpoint:

<p>ZOOM scroll to Midpoint</p> <p>ENTER</p>	<p>Move the cursor to side AC</p> <p>ENTER Label this point O</p>
---	---

	<p>Draw segments MO and ON</p>
--	--------------------------------

The measure of BC to 2 decimal places = _____

The measure of ON to 2 decimal places = _____

The measure of AB to 2 decimal places = _____

The measure of MO to 2 decimal places = _____

- 4) Calculate the ratio $BC:ON$. What happens to this ratio as you drag any of the vertices? _____
- 5) Calculate the ratio $AB:MO$. What happens to this ratio as you drag any of the vertices? _____
- 6) From your investigations what can you conclude about the measure of a segment connecting the midpoints of two sides of a triangle? _____
- 7) Is there any other geometric conclusion you can draw about the pairs of segments MN and AC , ON and BC , MO and AB ? _____
- 8) From your observations what kind of quadrilateral is $BNOC$? _____
- 9) From your observations what kind of quadrilateral is $MNAC$? _____
- 10) From your observations what kind of quadrilateral is $AOMB$? _____