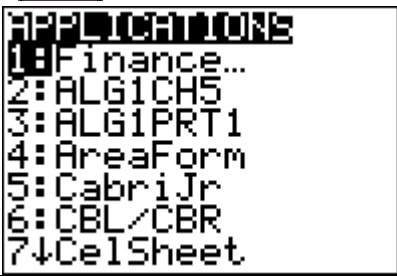
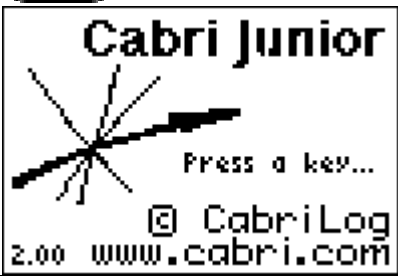

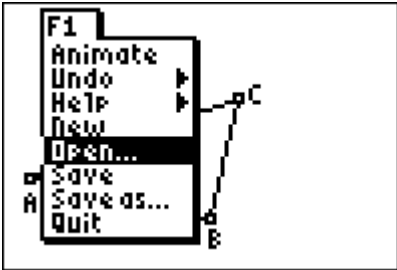
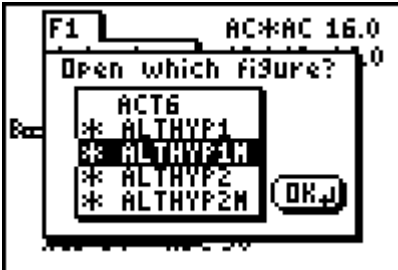
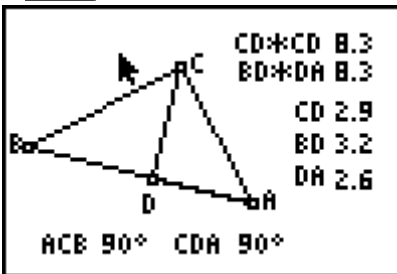


Student Worksheet for G.G. 47

<p>After turning on your handheld press</p> <p><b>APPS</b></p> 	<p>Select CabriJr.</p> <p><b>5</b></p> 
<p><b>Y=</b>  scroll down to Open</p> 	<p><b>ENTER</b> scroll to ALTHYP1M</p> 
<p><b>ENTER</b></p> 	<p>Now grab and drag vertices A and C. Take note of what is changing and what is remaining the same.</p> <p>Answer the questions that follow.</p>

- 1) As you selected, grabbed and moved points A and C
  - A) What changed? \_\_\_\_\_
  - B) What remained the same? \_\_\_\_\_
- 2) What kind of triangle is  $\triangle ABC$ ? \_\_\_\_\_
- 3) Name the hypotenuse of  $\triangle ABC$ . \_\_\_\_\_

- 4)  $\overline{CD}$  **must** be a(an) \_\_\_\_\_
- A) median
  - B) angle bisector
  - C) altitude
  - D) perpendicular bisector
- 5) Name the segments of the hypotenuse. \_\_\_\_\_
- 6) Which of the following statements seems to be true? \_\_\_\_\_
- A)  $CD \cdot CD > BD \cdot DA$
  - B)  $CD \cdot CD = BD \cdot DA$
  - C)  $CD \cdot CD < BD \cdot DA$
- 7) The answer to question 5 allows us to rewrite the expression as a proportion. Fill in the missing extremes:  $\frac{?}{CD} = \frac{CD}{?}$  \_\_\_\_\_
- 8) The answer to question 5 allows us to rewrite the expression as a proportion. Fill in the missing means:  $\frac{BD}{?} = \frac{?}{DA}$  \_\_\_\_\_
- 9) When the means of a proportion are the same that value is called the **mean proportional**. Example:  $\frac{a}{x} = \frac{x}{b}$  In this proportion  $x$  is the **mean proportional** between  $a$  and  $b$ . Using this example as a guide and your answers to questions 6 and 7 fill in the blanks of the following statement:
- CD is the \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_
- 10) Using your answers to questions 3 and 4 generalize the answer to question 8.
- If the altitude is drawn upon the hypotenuse of a right triangle then the \_\_\_\_\_ is the mean proportional between the \_\_\_\_\_.