
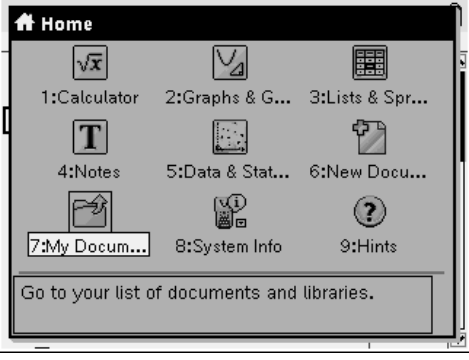

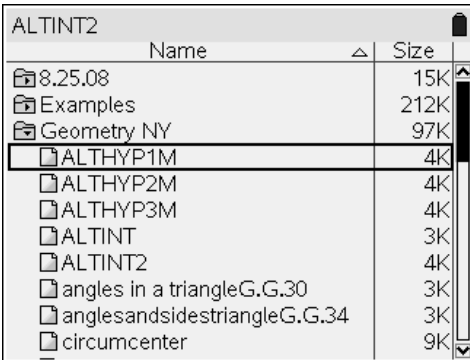

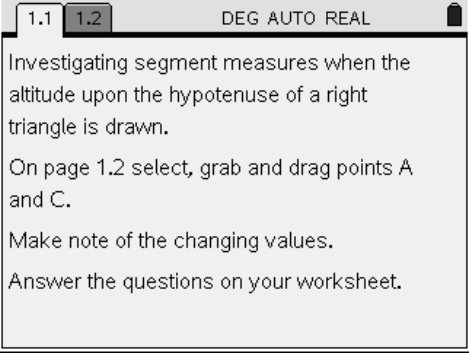

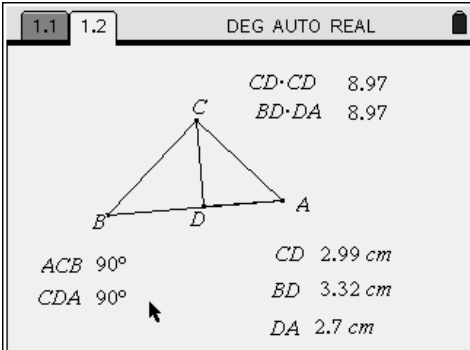


Student Worksheet for G.G. 47 and TI Nspire

<p>After turning on your handheld press </p> 	<p>Select My documents </p> <p>Open Folder Geometry NY</p> <p>Select ALTHYP1M</p>  <table border="1"> <thead> <tr> <th>Name</th> <th>Size</th> </tr> </thead> <tbody> <tr><td>8.25.08</td><td>15K</td></tr> <tr><td>Examples</td><td>212K</td></tr> <tr><td>Geometry NY</td><td>97K</td></tr> <tr><td>ALTHYP1M</td><td>4K</td></tr> <tr><td>ALTHYP2M</td><td>4K</td></tr> <tr><td>ALTHYP3M</td><td>4K</td></tr> <tr><td>ALTINT</td><td>3K</td></tr> <tr><td>ALTINT2</td><td>4K</td></tr> <tr><td>angles in a triangleG.G.30</td><td>3K</td></tr> <tr><td>anglesandsidetriangleG.G.34</td><td>3K</td></tr> <tr><td>circumcenter</td><td>9K</td></tr> </tbody> </table>	Name	Size	8.25.08	15K	Examples	212K	Geometry NY	97K	ALTHYP1M	4K	ALTHYP2M	4K	ALTHYP3M	4K	ALTINT	3K	ALTINT2	4K	angles in a triangleG.G.30	3K	anglesandsidetriangleG.G.34	3K	circumcenter	9K
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<p></p>  <p>Investigating segment measures when the altitude upon the hypotenuse of a right triangle is drawn.</p> <p>On page 1.2 select, grab and drag points A and C.</p> <p>Make note of the changing values.</p> <p>Answer the questions on your worksheet.</p>	<p></p>  <p> $CD \cdot CD = 8.97$ $BD \cdot DA = 8.97$ </p> <p> $CD = 2.99 \text{ cm}$ $BD = 3.32 \text{ cm}$ $DA = 2.7 \text{ cm}$ </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 _____.