

Individual Student Interview To Assess Student Understanding

You will interview a student about their understanding of the **Pythagorean Theorem**. The interview will last about 20-30 minutes.

You are trying to get a picture of the student's own thinking rather than whether the student can provide "correct" answers.

- ◆ Try to determine the depth of their understanding.
 - ◆ Are they just parroting back memorized responses?
 - ◆ Can they explain in their own words what it means?
 - ◆ Can they apply it with numbers you give them?
 - ◆ Can they draw a geometric representation of what it means?
 - ◆ Can they solve a problem you give them using it?
 - ◆ Can they write their own problem which would require the theorem to solve it?
 - ◆ Finally, can you encourage them to "prove" it in some way.
1. **PREPARE CAREFULLY:** Before the interview, prepare a list of questions you might ask. Think of the possible responses they might have and what you will do with a given response.
 2. Plan questions to follow up and probe what the student says. During the interview, the first few minutes should be directed toward making them comfortable with you and the situation.
 3. Start with broad questions rather than specific ones. Follow-up questions may be more specific until you zero in on what makes sense to the student.
 4. Keep anything they write or draw to include in your write-up.
 5. Take some notes as you talk, noticing the actions of the student as well as what they say.
 6. Do not be disappointed if the interview does not go exactly as you planned. Let the student's responses guide each question you ask.
 7. Be patient, real thinking takes time.
 8. As soon as possible after the interview, write down any insights that occurred to you including your hunches about what the student understands and what problem solving strategies were used.

Your write-up should include:

- ◆ *Description:* Describe student background, interview location, your relation to the student, time and duration of the interview. Attach a copy of your plan as well as alterations to it.
- ◆ *Reporting and Interpretation:* This is the heart of the paper. Do not report on each question asked. Start with some conjectures you have about this student's understanding and problem solving strategies and then use specific examples to back it up.
- ◆ *Pedagogical Implications:* Describe how you might help this student gain a deeper understanding.
- ◆ *Reflection:* Briefly assess your interview and reflect on what went well and what you might have done differently.