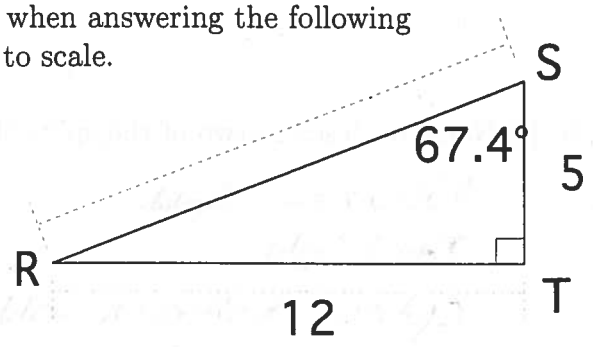
tcore 122: Quiz 5

1. (Weater §10.1) Consider the right triangle when answering the following questions. Note, the triangle is not drawn to scale.



   (a) [1] Identify the hypotenuse.

   (b) [1] Find $\tan 67.4°$.

   (c) [2] Find the length of $\overline{RS}$.

   (d) [2] Find $\cos 22.6°$.

2. [2] (5/4 Lecture) Name two methods that both scientists & mathematicians will use when they are trying to figure out problems.

3. [2] (5/4 Lecture) Name a feature that began to emerge after the Scientific Revolution that distinguished the mathematician from the scientist.

4. [1] (Lang Ch. 5) Define what a split in origami is.

5. [2] Name or describe two of the splits that Lang introduces in chapter 5 of his text.

6. (5/4 Lecture & Wheater §10.2) The crease pattern on the right was created by following the directions for the 'optimum Yoshizawa split' given on page 95 and worked with in class on 5/4. Use your knowledge of its construction to answer the following questions. Assume the length of the original square is one.

(a) [2] length of $\overline{HF}$

(b) [1] length of $\overline{HC}$

(c) [1] measure of $\angle BHC$

(d) [2] length of $\overline{HB}$

(e) [1] length of $\overline{BC}$