tcore 102: Quiz 5

Key

You will see this same quiz in Canvas Question 1 *and* Canvas Question 2.
Canvas Question 1: You have 30 minutes to complete the quiz and upload an answer. You can use a calculator and a four-sided 3×5" notecard with anything written or typed on it.
Canvas Question 2: You have 30 minutes to complete the quiz and upload an answer. You may work with your group and any materials provided inside the Canvas course.

1. Consider the excerpt (1st & 2nd paragraph) from a Literature Review of Pythagorus.

   (a) [3] Summarize the paper in under 20 words. Determine if your summary is captured in the introduction.

   We introduce the religion and theorem associated with the mathematician Pythagorus.

   (b) [3] Evaluate the peer evaluation that was given.

Writing, Organization & Style	intro or conclusion is missing *content is presented in a confusing manner *paragraphs & sentences are badly constructed *does not connect figures present to text	*Intro or conclusion is poorly written *content is present *most paragraphs & sentences are awkward	*intro or concl. are well organized *content is present but not well organized *some paragraphs & sentences are awkward *includes appropriate figures	*intro & concl. are generally organized *organized most of the way through *a few sentences are awkward	*has well written & organized intro, concl. *well organized throughout the paper *Paragraph & sentence structures are used well *connects all figures to the text well

Pythagorus is one of the oldest and best known mathematicians. Croton was experiencing a religious revival "leading to a plethora of quasi-religious communities...(that) shared (an) appreciation of a roster of taboos and rituals" (Barrow 1992). Pythagorus had a particularly interesting one that seemed to worship numbers and assumed their deep connection with, among other things, geometry.

Perhaps even more famous than the mathematician is the theorem that bears his name. The theorem relates to triangles. Let us denote the three side lengths of a triangle with letters, a, b, and c. Many know the Pythagorean theorem as "A right triangle satisfies the equation, $a^2 + b^2 = c^2$ where c is the length of the hypothenuse". This version of the Pythagorean theorem is quite useful in finding unknown lengths computationally. Interestingly, this is only *half* of the theorem! In particular, if $a^2+b^2 = c^2$, then we can say that the triangle has a right angle. This second half of the Pythagorean Theorem thus gives us a way of checking if an angle is 90° or not.

2. [4] Look at the lily pattern on the second side of this quiz. Identify:

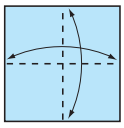
   (a) by name, the base(s) that were used Waterbomb

   (b) the step number that the base was folded. 3

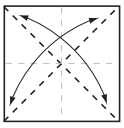
3. [Individual Bonus!] Fold the lily pattern whose directions are on the second side of the quiz and turn in one pdf with a picture from the top and from the side.

Origami Lily Instructions

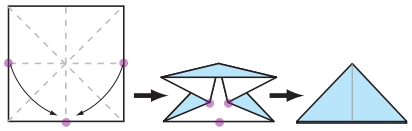
origami-fun
www.origami-fun.com



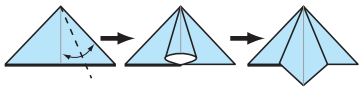
1. Start with your paper coloured side up.
Fold in half, then in half again, as shown. Crease well, then open out again.



2. Turn the paper over and fold in half diagonally and in both directions. Crease well and open out once again.

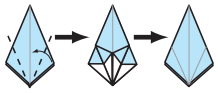


3. Holding the points shown, bring them both down to the centre point on the bottom line and flatten.



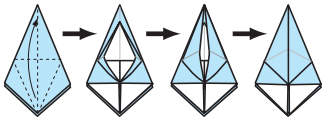
4. Fold the top triangle into the centre and unfold. Using this crease, open out the triangle and flatten.

5. You'll need to repeat step 4 on all four of the flaps of the waterbomb base. The model will now look like this.



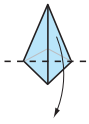
6. On the uppermost diamond, fold the outside corners into the centre line, crease well then open.

7. Fold the model in half and open.

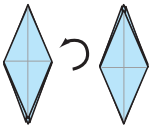


8. Using the creases made in step 6 and 7, lift the bottom point of the model (the uppermost layer only) up to the top point, bringing in the sides of the model at the same time, as shown.

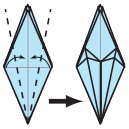
9. Repeat steps 6, 7 and 8 on each if the four sides. The model should now look like this.



10. Now fold down each of these triangles, on all four sides.

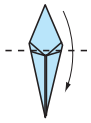


11. Rotate model upside down.



12. Fold the outer flaps toward the centre and flatten.

13. Repeat step 12 on all four sides of the model. The model should now look like this.



14. Fold down all petals. Completed Lily!