

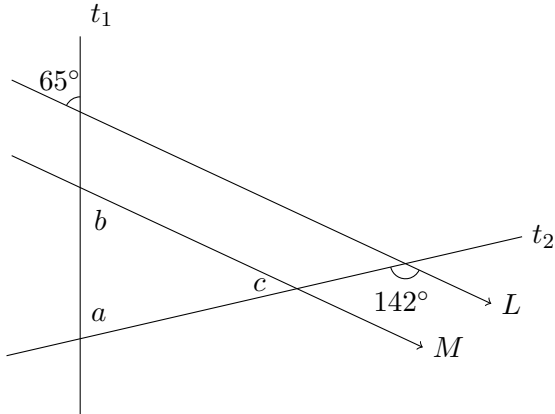
Math 123  
 Fall 2022  
 Dr. Lily Yen

# Quiz 2

Show all your work

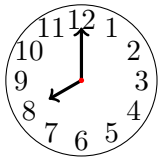
Name: \_\_\_\_\_  
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 Score: \_\_\_\_/20

**Problem 1:** Lines  $L$  and  $M$  are parallel with transversals  $t_1$  and  $t_2$ . Given two angles  $65^\circ$  and  $142^\circ$  as shown in the diagram, find the interior angles  $\angle a$ ,  $\angle b$ , and  $\angle c$  in the small triangle.



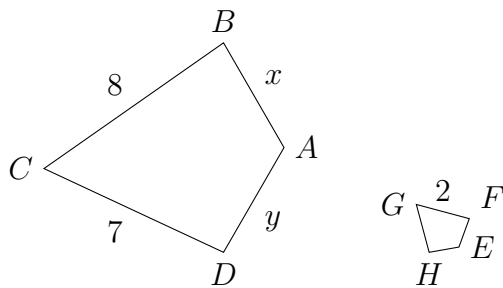
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**Problem 2:** Find the smaller angle formed by the hour hand and the minute hand at eight o'clock on a twelve-hour analogue clock. Show your work.



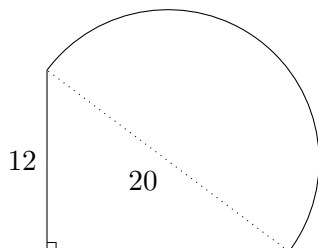
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**Problem 3:** Given two similar quadrilaterals: quadrilateral  $ABCD$  is similar to quadrilateral  $EFGH$ , find  $x$  and  $y$  given that  $\overline{FE} = 1/2$ , and  $\overline{HE} = 3/5$ .



Score: \_\_\_\_/3

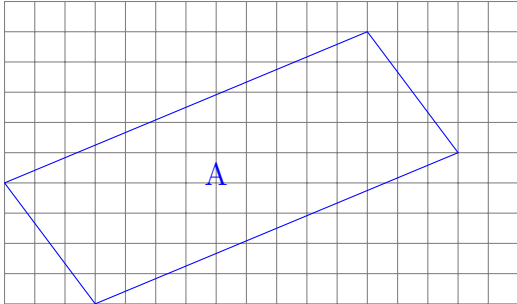
**Problem 4:** Find the combined perimeter of a right triangle with a semicircle drawn on its hypotenuse. If necessary, round to nearest thousandths.



Score: \_\_\_\_/3

**Problem 5:** Shown is Quadrilateral *A* on the grid.

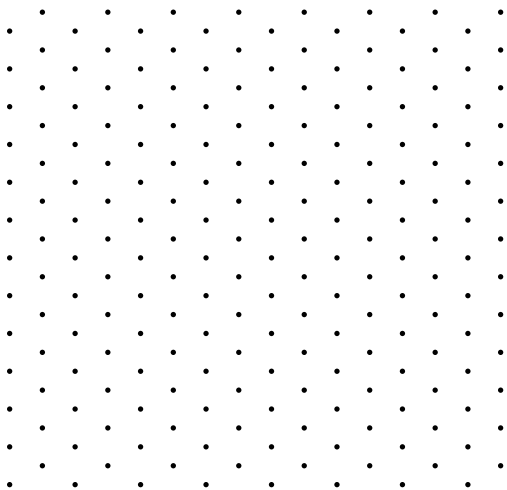
- Find the perimeter of the quadrilateral.
- Draw a circle of your choice completely inside Quadrilateral *A* and find the area of the quadrilateral minus your circle.



Score: /3

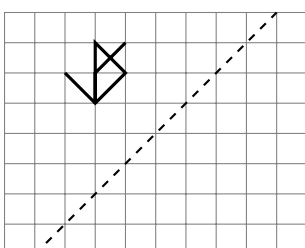
**Problem 6:** In the three dimensional guide below, draw a tall square prism with base area 9 square units.

- Indicate the height of the square prism on the 3-D grid.
- Drill a cylindrical hole of radius 1 in its base circle from the top to the bottom of the tall square prism. Find the volume of the resulting solid.



Score: /4

**Problem 7:** Reflect the given figure along the dashed line.



Score: /2