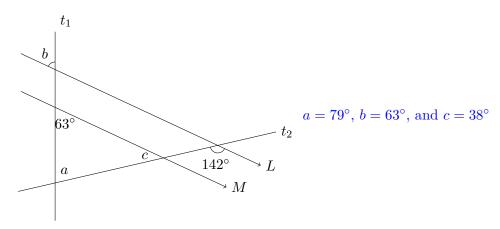
Math	123-01
Fall 2	025
Dr. Li	ilv Yen

Quiz 3 Show all your work

Name:		
Number:		
Signature:		
Score:	/10	

Problem 1: Lines L and M are parallel with transversals t_1 and t_2 . Given two angles 63° and 142° as shown in the diagram, find the angles $\angle a$, $\angle b$, and $\angle c$.



Score: /3

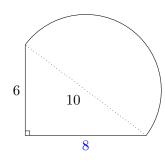
Problem 2: Find the smaller angle formed by the hour hand and the minute hand at ten past ten o'clock on a twelve-hour analogue clock. Show your work.

Since 360° is one full round of the circle, each hour covers
$$360^\circ/12 = 30^\circ$$
. So the smaller angle is $60^\circ + 2 \times 30^\circ - \frac{10}{60} \times 30 = 115^\circ$.

Score: /2

Problem 3: Find the area of the combined shape of a right triangle with a semicircle drawn on the triangle's hypotenuse of length 10. If necessary, round to nearest thousandths.

 $63.270 \,\mathrm{u}^2$

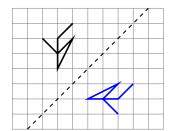


If the last side of the triangle has length x, the Pythagorean Theorem gives that $x^2+6^2=10^2$, so $x^2=10^2-6^2=64=8^2$, so x=8.

The semicircle has radius 10, so area is $\frac{1}{2} \times \pi 5^2 = 25\pi/2$. The area of the triangle $6 \times 8/2 = 24$, so the total area is thus $24 + 25\pi/2 \approx 63.270$.

Score: /3

Problem 4: Reflect the given figure along the dashed line.



/2