1(2). \( \sin B = \frac{\sqrt{3}}{2} \),
What are the possible values, in degrees, for \( \angle B \)?
2 and 3 symbols + units, chk=6,3

2(1). \( \cos B = -\frac{\sqrt{3}}{2} \),
What is the possible value, in degrees, for \( \angle B \)?
3 symbols + units, chk=6

3(3). Is there any triangle in which \( a=2 \), \( b=3 \), and
\( \angle A = 41^\circ \)? One point for the answer, two for showing your work.

4(4). \( a=30 \), \( b=36 \), \( \angle A = 20^\circ \). There are two possible
triangles with these sides and angles. Decimal answer only.
Find the areas of these two triangles. Show your work.
Either find \( c \) or find \( \angle C \). Then use Lecture 25’s area formula.
One answer is almost 40, the other is between 360 and 390.

§8.1 587:25-40. Convert the polar coordinates to
rectangular coordinates. Give exact answers. Both involve
the square root of 2.
5(1). \( (5, \frac{\pi}{4}) \)

6(1). \( (-5, \frac{\pi}{4}) \)

Convert the rectangular coordinates to polar
coordinates. Give exact answers with \( r>0 \). Both involve \( \pi \).
7(1). \( (3, \sqrt{3}) \)
9 symbols, chk=11

8(1). \( (0, -2) \) \( \tan^{-1} \frac{1}{2} \) is undefined, draw the picture instead.
8 symbols, chk=4

§8.1 587:41-60. Convert the polar equation to a
rectangular. Simplify any radicals. E.g. \( x^2+y^2 = 9 \) instead
of \( \sqrt{x^2+y^2} = 3 \)
9(1). \( 2 \sin \theta - 3 \cos \theta = r \)
11 or 13 symbols, chk=9

10(1). \( r = 4 \)
8 symbols, chk=11

Convert the rectangular equation to a polar equation.
11(1). \( x^2 + y^2 = 25 \)
3, 4 or 5 symbols, chk=5 or 9

12(1). \( y = x^2 \)
13 symbols, chk=4

The smaller area to 2 decimal places: _____ . _____
Decimal answer only, chk=23.
The larger area to 2 decimal places: _____ . _____
Decimal answer only.