

Equations in one variable

Circle those equations that have no solution

1.) $e^{2x} = 3$

2.) $\log_e(x-4) = 5$

3.) $\sqrt{2x-1} = -3$

4.) $e^{3x-4} = 0$

5.) $(2x-5)^2 = 0$

6.) $\log_e(2x-1) = -7$

7.) $e^{4x} = -5$

8.) $(2x + \frac{1}{x})^2 = -4$

Find the implied domains of the equations

9.) $e^{x^2-3x} = 4$

10.) $(3x^4 - 2x)^2 = 3$

11.) $\log_e(x-7) = -10$

12.) $\log_2(x-4) + \log_2(x+3) = 1$

Simplify

13.) $e^x e^{x+1}$

14.) $\log_e(x+2) + \log_e(x-4)$

15.) $(e^{x-3})^2$

16.) $\log_e(x) - \log_e(x-1)$

Write the next step in solving each equation

17.) $e^{3x-7} = 2$

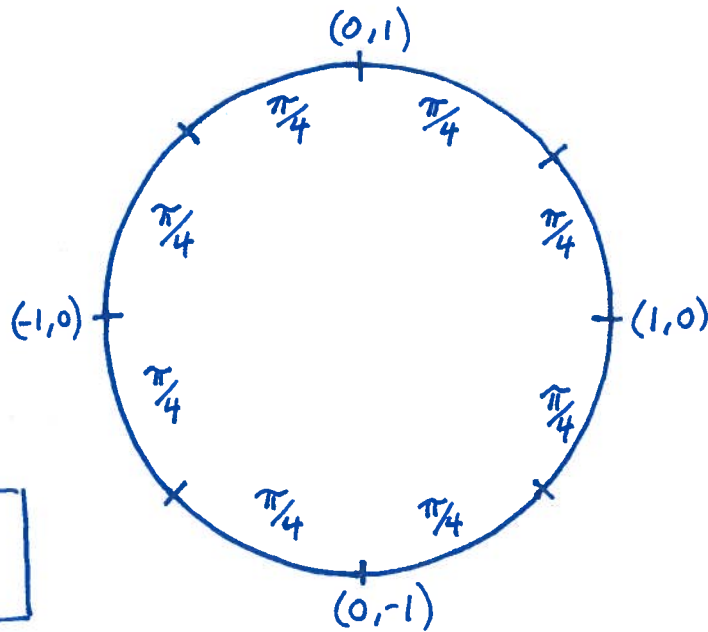
18.) $\log_e(2x-4) = 3$

19.) $(2x-7)^2 = 25$

20.) $\log_e(x+1) = \log_e(3)$

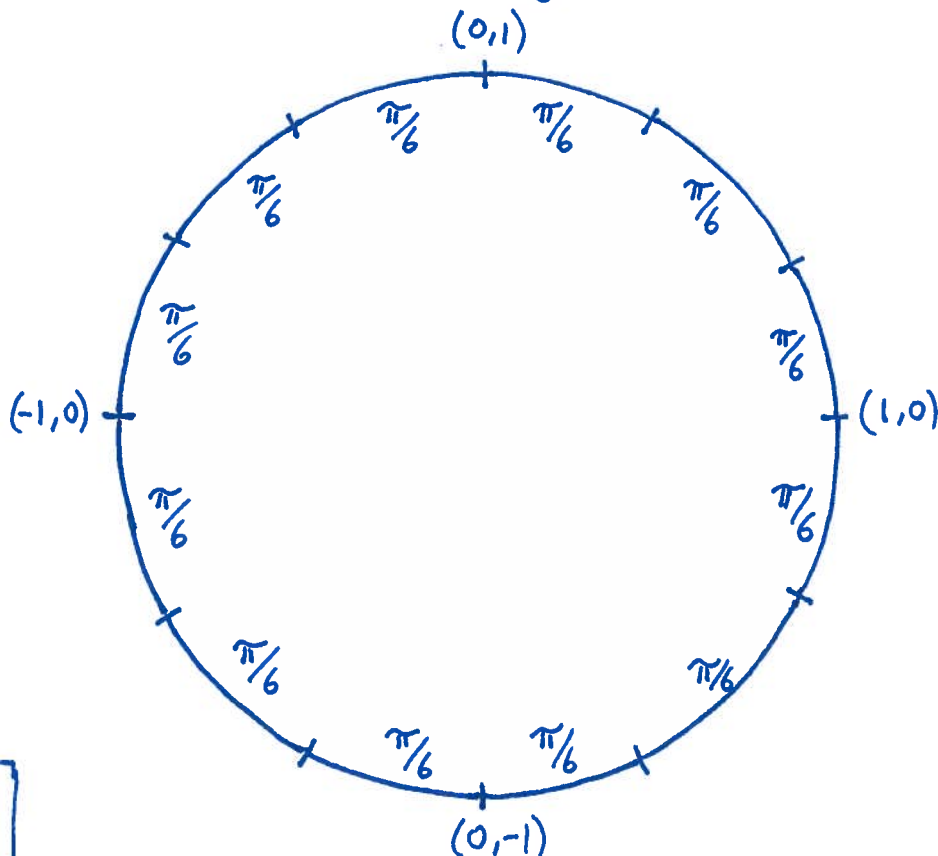
Angles

What's the only positive number you'll use to write the coordinates of the unlabelled points below?



$$\sin\left(\frac{3\pi}{4}\right) =$$

Which are the only two positive numbers you'll use to label the coordinates below?
Which of the two is greatest?

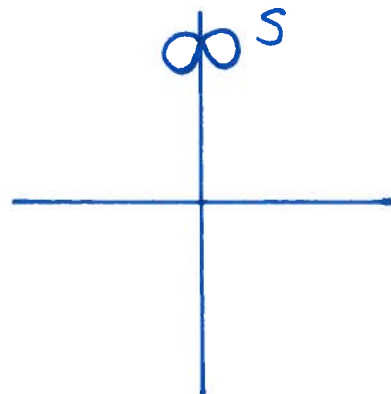


$$\cos\left(-\frac{\pi}{3}\right) =$$

Polar Coordinates

- 1.) What's the norm of $(-2, 7)$?
- 2.) What's the norm of $(3, -1)$?
- 3.) Write $(-2, 7)$ in polar coordinates.
- 4.) Write $(3, -1)$ in polar coordinates.
- 5.) Rotate $3(\cos(4), \sin(4))$ counterclockwise by an angle of 7.
- 6.) Rotate $2(\cos(10), \sin(10))$ clockwise by an angle of 6.

- 7.) Draw $R_{\pi/2}(S)$ and $R_{-\pi/2}(S)$ on the axes to the right.



8.) Write $R_{-\pi/3}$ as a matrix.

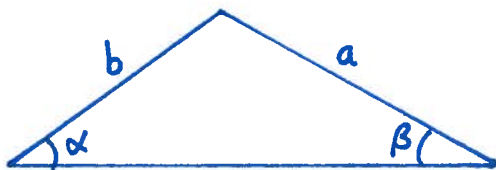
9.) Write $R_{\frac{5\pi}{4}}$ as a matrix.

10.) Rotate $(5,7)$ clockwise by an angle of $\pi/3$.

11.) Rotate $(3,11)$ counterclockwise by an angle of $\frac{5\pi}{4}$.

Triangles

1.) State the Law of Sines



2.) State the Law of Cosines

