

No Calculator

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CALC 20 Version 1- getting ready for calculus

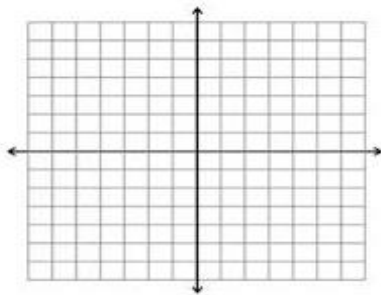
1. Solve for x: $rx + 5 = 5x - 2$ [280]

2. Solve $5x^3 + 11x^2 + 2x = 0$ [281]

3. Factor and solve $3e^{2x} + 5e^x - 2 = 0$ [282]

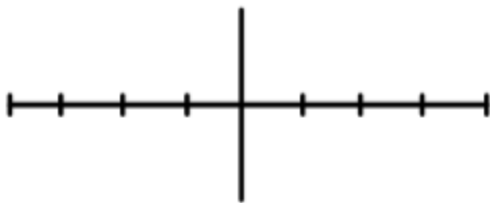
4. Make a rough sketch of each of the following on the same graph: [283]

$y = e^x$ and $y = \ln x$ and $y = x$



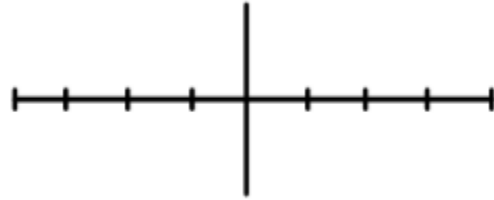
5. Make a rough sketch of each of the following –LABEL both Axes: [284]

$y = \cos x$ and $y = \sec x$



6. Make a rough sketch of each of the following – LABEL both of the Axes: [285]

$y = \sin x$ and $y = \tan x$



7. What is the equation for a circle and that equation solved for y=? [286]

8. Solve for y by knowing what multiplying by negative one really does to subtract:
 $-y = x^2 - \ln 3$ [287]

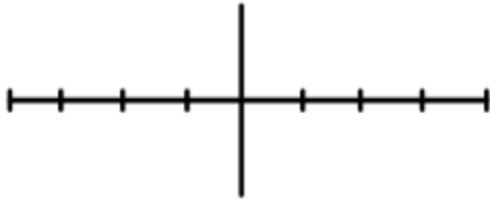
9. Exponentiate from base e to solve for y:
 $\ln y = x^2 + \ln 3$ [288]

10. Exponentiate from base e to solve for y:
 $\ln|y + 1| = x^2 - e^3$ [289]

11. Take the log of both sides to solve for x:
 $2^x = 10$ [290]

12. Make a detailed graph of one period of $y = \sin x$ to answer the following questions: [291]

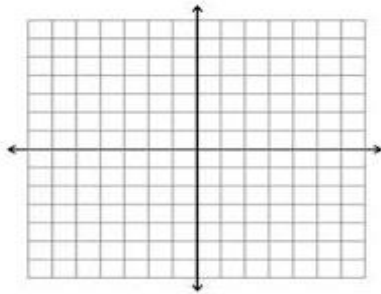
$\sin \theta = 1$ and $\sin\{\frac{\pi}{2}\} =$ and $\sin \theta = 0$



13. Make a detailed graph of the following polynomial to answer the following:

$f(x) = (x + 3)^2(x + 5)^3(x - 1)$ [292]

solve $f(x) \geq 0$, answer in interval notation.



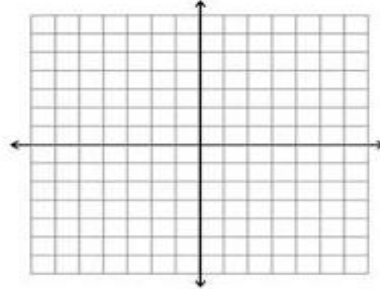
14. Use long division to see if $x = 2$ is a root of $f(x) = 5x^2 - 13x + 6$ [293]

15. Prove that this fn is even or odd:

$f(x) = 5x^2 + 4$ [294]

16. Make a rough sketch of each of the following: [295]

$y = \frac{1}{x}$ and $y = \frac{1}{x^2}$ make one dashed.



17. Use long division to make $\frac{x+2}{x-4}$ into 1 plus a fraction [296]

18. Build an inverse of this function:

$y = \frac{2x}{x-7}$ [297]

19. Solve: $\frac{\frac{4}{x} + 2}{\frac{1}{x}} = 4$ [298]

20. If $f(x) = 3x^2 - 5x + 2$, find and simplify $f(x+h)$ [299]