

Joey, in case they run out of questions and want to do some problems for practice, here are four:

1) $e^{(x^2-3)/2} = 5$, solve for x

[answer: $x = \pm \sqrt{2 \ln(5) + 3}$]

2. Find the intercepts & location of the tip of the parabola $y = x^2 - 8x + 12$.

[x-ints at $x=2$ & $x=6$, y-int at $y=12$,
& tip at $(4, -4)$]

3. $y = -2x^2 + 6x + 8$

[x-ints at $x=-1$ & $x=4$; y-int at $y=8$;
tip at $(2.5, 12.5)$]

4. Verify the trig identity

$$\sin(4x) = 2 \cos^3(x) \sin(x) - 2 \cos(x) \sin^3(x).$$

[Use double angle formulas to expand $\sin(4x)$ until it is in terms of $\cos(x)$ & $\sin(x)$.]

Problems like these will be fair game for the first test, as will problems about limits, which started today.

Q.