MATH 141 (Section 5 & 6) Prof. Meade

Quiz 2 September 5, 2013 University of South Carolina Fall 2013

Name: Section: 005 / 006 (circle one)

- 1. (6 points) Starting with the graph of $y = e^{-2x}$, write the equation of the graph that results from
 - (a) shifting 3 units to the left

$$y = e^{-2(x-(-3))} = e^{-2(x+3)} = e^{-2x-6}$$

(b) reflecting about the y-axis

(c) reflecting about the x-axis and then about the y-axis

$$y = -e^{-2(-x)} = -e^{2x}$$

2. (2 points) Express $\ln(a+b) - 2\ln(a-b)$ as a single logarithm.

=
$$\ln (a+b) - \ln (1a-b)^2$$

= $\ln (\frac{a+b}{(a-b)^2})$

3. (2 points) Simplify the expression $\cos(\arcsin(x))$.

Let
$$\theta = \arcsin(x)$$
.
then $\sin \theta = x$
and $\cos \theta = \frac{\sqrt{1-x^2}}{1} = \sqrt{1-x^2}$.

