(1) If $e^{.5}$ is approximated by using the tangent line to the graph of $f(x) = e^x$ at (0,1), and we know $f'(0) = 1$, the approximation is
   (a) .5
   (b) $1 + e^{.5}$
   (c) $1 + .5$

(2) The line $y = 1$ is tangent to the graph of $f(x) = \cos x$ at $(0, 1)$. This means that
   (a) the only x-values for which $y = 1$ is a good estimate for $y = \cos x$ are those that are close enough to 0
   (b) tangent lines can intersect the graph of f infinitely many times
   (c) the farther x is from 0, the worse the linear approximation is

(3) Imagine that you increase the dimensions of a square with side x_1 to a square with side length x_2. The change in the area of the square, ΔA, is approximated by the differential dA. In this example, dA is
   (a) $(x_2 - x_1)2x_1$
   (b) $(x_2 - x_1)2x_2$
   (c) $x_2^2 - x_1^2$
   (d) $(x_2 - x_1)^2$

(4) Imagine that you increase the dimensions of a square with side x_1 to a square with side length x_2. If you estimate the change in the area of the square, ΔA by the differential $dA = 2x_1(x_2 - x_1)$, this will result in an
   (a) overestimate
   (b) underestimate
   (c) exactly equal