

Bonus Activity Mac 1105 Online – 8 points – Due December 8 at 11:59 pm.

Late submissions will NOT be accepted. The points will be added to the midterm grade.

- 1. Solve ONE equation. Show all steps for full credit.
(4 points)**

(a) $2^{2x} + 2^{x+2} - 12 = 0$

(b) $36^x - 6 \cdot 6^x = -9$

(c) $3^x - 14 \cdot 3^{-x} = 5$

- 2. Solve the problem. Show all steps for full credit.
(4 points)**

Healing of Wounds The normal healing of wounds can be modeled by an exponential function. If A_0 represents the original area of the wound, and if A equals the area of the wound, then the function

$$A(n) = A_0 e^{-0.35n}$$

describes the area of a wound after n days following an injury when no infection is present to retard the healing. Suppose that a wound initially had an area of 100 square millimeters.

- (a) If healing is taking place, after how many days will the wound be one-half its original size?
(b) How long before the wound is 10% of its original size?