

Quiz#2

score _____/35

Names _____

Must be done with 1—3 partners! Sign to acknowledge

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that all contributed and understand.

Signatures _____

Math 232

Fall 2008

SHOW WORK!!!

1. A company produces cylindrical metal oil drums each of which must hold 40 cubic feet of oil. How should the oil drums be constructed so that they use as little metal as possible? *Recall: A right circular cylinder has volume $V = \pi r^2 h$ and surface area $S = 2\pi r h + 2\pi r^2$.*

20 pts.

2. The population of fish in a stream t years after 1990 is given by the exponential function $P(t) = 750(1.08)^t$. ^{15 pts.}
In what year will the fish population have doubled in size? *Hint: 0 years after 1990, there are $P(0) =$ _____ fish.*
*So, how many years after 1990 will the number of fish, that is $P(t)$, be equal to $2 * P(0)$?*