(Debug)
$$ln[^o]:= (* Ex 3 *)$$

(Debug) $ln[^o]:= hmt = 34.6 - .5 q^2;$
(Debug) $ln[^o]:= n1 = 1411;$
(Debug) $ln[^o]:= n2 = 3411;$
Solve $\left[\frac{hmt}{x} == \left(\frac{n1}{n2}\right)^2, x\right]$
(Debug) $Out[^o]= \left\{\left\{x \to -0.584399 \left(-346. + 5. q^2\right)\right\}\right\}$
(Debug) $ln[^o]:= eq = Expand \left[-0.5843989289379137 \left(-346. + 5. q^2\right)\right]$
(Debug) $ln[^o]:= 202.202 - 2.92199 q^2$
(* a - b q² *)