#8  (c) Both $w$ and $m$ are linear functions of $t$ so they are linear in terms of each other, $w = 1.08m + 21.7$; for every sec a man's time increases, a woman's increases by 1.08. Vertical intercept has no significance.

1.6 #2 (a) $y = 150 - 19t$  
(b) $d = 150 - 19t$  
(c) $d = 157 - 20t$  
(d) slope: #deer is falling by 20 per yr  
(e) $r = -0.983$ indicates strong negative linear correlation.

#4 (c) $y = 0.82x + 3.62$  
(d) $y(37) = 34$  
(e) Estimate in (d) is interpolation; the estimate of pref: 60 $\to$ may prof: 53 is extrapolation.

#6 (a) Pref: $x$, non-pref: $y$  
(b) $y = x + 3$  
(c) $y = 0.82x + 3.62$  
(d) $y(37) = 34$  
(e) $r = 0.971$ since data have strong positive linear correlation (f) Lower group is women, upper group is men.

#8 (a) Add distance 0m, men 0 sec, women 0 sec  
(b) $t_{men} = 59d - 12.04$; men's time increases at rate of 59 sec/m  
$\overline{t_{men}} = 64d - 10.90$; this line is steeper meaning men swim faster; vert intercept has no significance.