

10. Slope = 30

y-intercept = 120

$$y = 30x + 120$$

$$22. \quad m = -25$$

Let $t = 0$ represent 2012

$$(0, 8040), (t, C)$$

$$C - 8040 = -25(t - 0)$$

$$C - 8040 = -25t$$

$$C = -25t + 8040$$

$$C(t) = -25t + 8040$$

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$$y = 875x + 10675$$

$$y = 875(0) + 10675$$

$$y = 10675$$

$$y\text{-intercept} = (0, 10675)$$

25 $(2004, 1250), (2012, 875)$

$$(a) 1250 - 875$$

$$= 375$$

(b) Let $t = 0$ represent 2004

$t = 8$ represent 2012

$$\text{Average} = \frac{875 - 1250}{8 - 0} = -\frac{375}{8} = -46.875$$

Average decline per year is 46.875

(c) $m = -46.875$ y -intercept $= (0, 1250)$

$$p = -46.875t + 1250$$

$$= -46.875t + 1250$$