Alg % increase/decrease Apps

1) $500(1.032)^3 = \$549.55$ (B)

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2) beg 4th year → end year 3

decrease by 10% means worth 90% each year

$(1-.1) = .9$

$25{,}000(.9)^3 = \$18{,}225$ (B)

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3) (D) 740 → initial

.0125 → % → 1.25% interest

y value → How much $

+ → # years

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4) Jan 1 → June 1

Jan, Feb, Mar, Apr, May → 5 months

$1-.0175 = .9825$

$925(.9825)^5 = \$846.85$ (A)

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5) $5000(1+.009)^1 = 5045$

$5000(1+.009)^3 = 5136.23$

$\$91.23$

(C)

6) 2012 → 3 years

2015 → 6 years

$5000(1.055)^3$ 5871

$5000(1.055)^6$ 6894 → 1023 increase

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7) $4500(.9)^7$ pay back 10% still owe 90%

buy 8th → end 7th

$2152.34

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8) 3 years → 36 months

$15,000(1.00005)^{36} = \$15027.02$

0.005% = .00005

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9) day → 24 hours 40313

$12,500(1.05)^{24}$ 40,313.7493

$12,500(1.05)^3$ − 14470.3125 14470

dif y → 25843

24 − 3 = 8 dif x

$\frac{25843}{8} =$ 3230.375 bacteria/hour

(6) depreciates → loses value

$1 - .1075 = .8925$

$1 - .14 = .86$

$22,500(.8925)^4$ 14276.29

$22,500(.86)^4$ − 12307.68

1968.61