

MA1S02 Coursework 3 – TV Purchase

Question One

(i) £3,675.13 – Total $3000(1+7/100)^3$

£102.08 – Monthly $3675.13/36$

(ii) £19,138.36 – Total $4000(1+11/100)^{15}$

£106.32 – Monthly $19,138.36/180$

Question Two

(I) inflation rate of 3.1%, TV was £3000. The expected cost of a new TV in 1 year will be £3093
 $(3.1 \times 3000 / 100 =) 93$

(ii) Inflation rate of 3.1%, TV was £3000. The expected cost of a new TV in 20 years time will be
 £4,860 $(3.1 \times 3000 / 100 =) 93 * 20 = 1,860$

(iii) Inflation rate was 2.9% last year, TV was £3000. The expected cost of a new TV 1 year ago
 was £2,913 $(2.9 \times 3000 / 100 =) 87 - 3000$

(iv) Inflation rate was 2.1% the year before last, The cost of the TV would have been £ 2,852.00
 $(2.1 \times 2913 / 100 = 61 - 2913 = 2,852.00)$

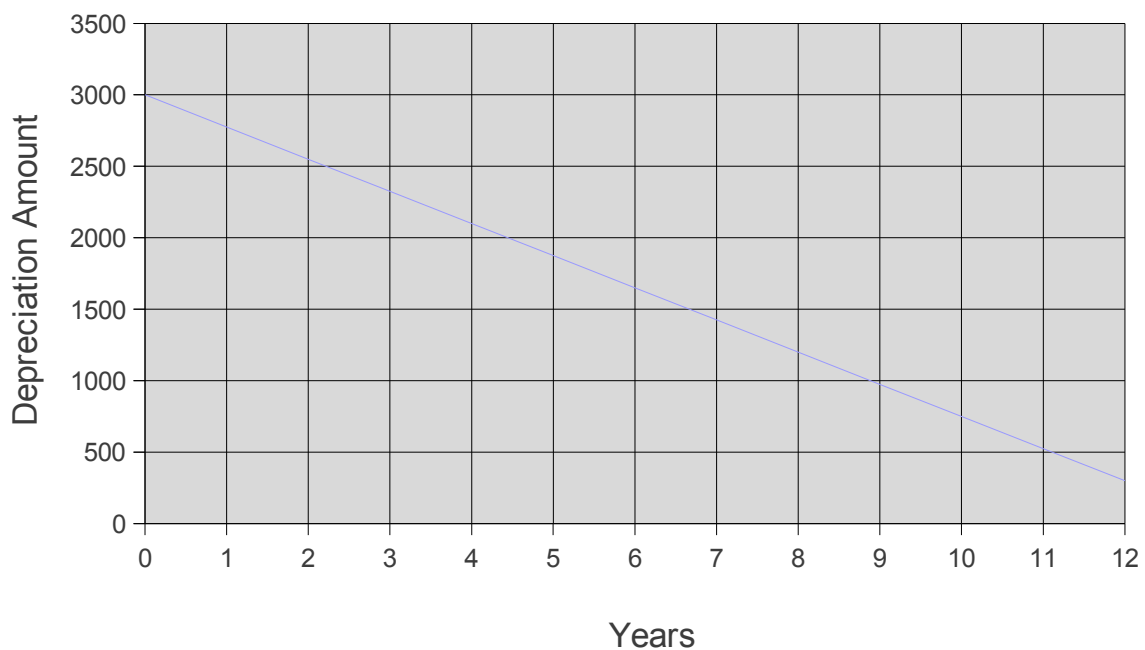
Question Three

(I) Keep TV for 12 years and then sell it for £300 the initial value was £3000. the yearly
 depreciation is £225 $(3000 - 300/12)$

Number of Years	Depreciation Value
<i>initial value</i>	<i>£3,000.00</i>
1	£2,775.00
2	£2550.00
3	£2325.00
4	£2100.00

5	£1875.00
6	£1650.00
7	£1425.00
8	£1200.00
9	£975.00
10	£750.00
11	£525.00
12	£300.00

Depreciation over 12 Years



The equation of the line is $y = mx + c$

$$y = -225x + 3000$$

(ii) Suppose instead the depreciation is £295 per year and the TV is sold after 6 years, the salvage value is £450.83 ($3000 - 295 \times 6$)

(iii) Suppose instead the depreciation is £350 per year and the TV is sold for £550, this means that the TV was sold after 7 years ($3000 - 550/350$)

Question Four

(I) If the exchange rate from GBP to USD is 1.921 the cost of the £3000 TV would be \$5,763 (1.921×3000)

(ii) A similar TV is \$5000 in USA, it will be £2,602.81

(iii) If the TV was sold to an American for £2500, he pays in USD. There is a 1.5% charge to convert the money I would get £2,462.52

$$2500 \times 1.921 = \$4,802.50$$

$$1.5 \times 4,802.50 / 100 = \$72$$

$$4802.50 - 72 = \$4,730.50$$

$$\$4,730.50 / 1.921 = £2,462.52$$