IB Math Studies 1   BELL WORK

Chapter 5

Sequences and series

Syllabus reference: 1.7, 1.8, 1.9

Assets such as computers, cars, and furniture lose value as time passes.

Depreciation is the loss in value of an item over time.

The **depreciation formula** is $FV = PV \times \left(1 + \dfrac{r}{100}\right)^n$

where FV is the **future value** after n time periods

PV is the **original purchase value**

r is the **depreciation rate per period** and r is **negative**

n is the **number of periods**.

a I buy a laptop for ¥87 500 and keep it for 3 years. During this time it depreciates at an annual rate of 30%. What will its value be after 3 years?

b By how much has the laptop depreciated?

$r = -30\%$

$$FV = 87500 \left(1 + \left(\frac{-30}{100}\right)\right)^3$$

$$87500 (0.7)^3 = ¥30,012.5$$

$$87500 (0.7^3)$$

Assignment:

5 G # 2, 5

Review Set 5 B

Sequences and Series QUIZ Monday