

Sangam Skm College - Nadi

Year 12

Mathematics

Worksheet 5

Questions:

1. Samson bought a SMART T.V from Courts. The cash price was \$8000. He paid a deposit of \$2000 and the balance is to be paid within an year with monthly installments of \$600.
 - (a) Work out the total monthly installments.
 - (b) What is the total amount Samson will pay for the Smart T.V?
 - (c) Explain the benefits of early repayments.

2. (a) The table below shows the result of the operation ϕ on the set {f, g, h, m }.
Show whether the operation ϕ is a group.

ϕ	f	g	h	m
f	m	g	f	h
g	h	m	g	f
h	f	g	h	m
m	h	f	m	g

- (b) Given that $\log k = 6$, then find the value of $\frac{\log k^3}{3}$.

3. Lewis played a game of space invaders. He scored points for each spaceship that he captured. He scored 140 points for capturing his first spaceship, 160 points for capturing his second spaceship, 180 points for capturing his third spaceship and so on. The number of points scored forms a sequence.
 - (a) Name the type of sequence formed above.
 - (b) Find the number of points that Lewis scored for capturing 20 spaceships.
 - (c) Find the total number of points Lewis scored for capturing his first 20
 - (d) spaceships.