

APT Academic Limited	Name:
Percentage Mock A	Y8 Maths

Table 1 Complete the following table.

Original value	Percentage change	Change in value	New value
260	-29%	-75.4	184.6
28	+36%		
32	-75%		
520			2560
370		-52	
	+120%		3300
	-20%	-35	

Question 1

A number increases by 70% and then decreases by 70%. Find the percentage change in the number.

Question 2

If the principal is \$1 000 and the interest rate is 4% p.a., how long does it take to get a simple interest of \$2000

Question 3

The number of members in the Mathematics club this year is 20% more than last year, while the number of members last year was 25% less than 2 years ago. If there are 108 members in the Mathematics club this year, find the number of members in the Mathematics club 2 years ago.

Question 4

A man bought a car at \$240000 in 2005 and paid \$3500 to insure it for the first year. For each of the next four years, the insurance would cost him 10% less than for the previous year unless he made an insurance claim. If he made an insurance claim, the insurance would cost 20% more than for the previous year.

(a) Find the total cost for insurance for the first four years assuming that he did not make any claims.

(6 marks)

(b) If he did make an insurance claim during the fourth year, find the cost of his insurance for the fifth year.

(6 marks)

Question 5

The monthly salary of an employee was \$26 000 last month. It was increased by 5% this month but it will be decreased by 5% next month.

(a) Find his monthly salary next month. [2]

(b) Find the overall percentage change in his monthly salary [2]

Question 6

There were initially 250 staff members in a company, of which 56% were female. 4% of the staff members resigned thereafter and 70% of them were female.

a. Find the present number of female staff members in the company at present. [3]

b. Find the present number of male staff in the company. [2]

c. Find the respective percentage change in the number of male and female staff members. (give your answers correct to 3 significant figures if necessary.) [3]

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Question 7

The number of newborn babies in a city decreases at a rate of 15% per year. If the number of newborn babies in that city this year is 35 000, what was the number 3 years ago?
(Give your answer correct to the nearest thousand.)

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Question 8

Mr Li deposits \$10 000 in a bank at 8% p.a. Find the simple interest and the amount for each of the following deposit period.
(a) 3 years
(b) 9 months

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Question 9

Billy deposits a sum of money in a bank at 6% p.a., and the interest is compounded half-yearly. If he obtains \$3185 compound interest after $2\frac{1}{2}$ years, how much is his principal?

(Give your answer correct to the nearest hundred.)

Question 10

In the year 2004/05, the net chargeable income of Leon is \$130 000. Find his salaries tax payable. The table below shows the salaries tax rate for the year 2004/05:

Net chargeable income	Tax rate
On the first \$30 000	2%
On the next \$30 000	8%
On the next \$30 000	14%
Remainder	20%