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# THE TREASURY

#### **GIVEAWAY PRIZE**

Suppose that you won first prize in a Reader's Digest Giveaway contest.

The prize consists of either a lump sum of \$50,000 now OR

\$250 per month for the rest of your life.

Which would you choose? Why?

Would your decision be the same if you were ten years older?

## HIGH SCHOOL DANCE

Suppose that your class at high school is organising a dance and your job is to decide on the cost of the tickets.

The hire of the band, printing of tickets and other administrative expenses will cost \$600. Supper is to be provided and will cost \$4 per head. Drinks will be provided and an allowance of \$5 per male and \$4 per female is to be made.

The cost of the ticket is to cover all expenses including food and drink.

It was decided that everybody must bring a dancing partner and, after a survey had been carried out, 250 couples were expected to attend.

How much should a double ticket cost if you want to

- (a) just cover costs?
- (b) make a profit of \$100 ?

#### TYRE WEAR

The distance meter (odometer) on your family car measures the number of kilometres it travels, and let's assume it was recording correctly when the tyres were new.

Suppose that at that time the overall diameter of the wheels plus tyres was 56 cm.

Several months later some 9.5mm of tread have been worn evenly from the tyres. How would this effect the reading of the odometer?

## **BUS ROUTES**

Suppose that you are a transport officer in a simple town which has X and Y as its two bus depots and A, B and C as the termini of its three bus routes.

Each depot must garage three buses overnight, and every morning two buses must be sent to each terminus.

Assuming that the buses must travel only North/South or East/West along any of the streets as shown by grid lines in the accompanying figure, what is the most economical way of sending out the buses?

