

2. GAC010 Mathematics II: Probability, Statistics and Finance Starter Quiz · 课前小测

GAC Mathematics

Name: _____ Score: _____

1. An investment grows by 4% each year. Which family is it?
 - ☐ Arithmetic
 - ☐ Geometric
 - ☐ Neither
 - ☐ Both
2. Which figure should a personal budget be built on?
 - ☐ Gross pay
 - ☐ Net pay
 - ☐ Either
 - ☐ The advertised salary
3. 10000 at 9% compounded annually for 3 years, or at 8.7% compounded monthly. Which costs more?
 - ☐ The 9% annual
 - ☐ The 8.7% monthly
 - ☐ They cost the same
 - ☐ It cannot be compared
4. A question asks for $P(\text{at least one})$. What is usually the fastest route?
 - ☐ List every favourable case
 - ☐ Find $P(\text{none})$ and subtract from 1
 - ☐ Add the individual probabilities
 - ☐ Multiply the individual probabilities
5. You want student opinion on the canteen. Which sample describes the school?
 - ☐ The queue at 12:30
 - ☐ Every tenth name on the roll
 - ☐ Your own class
 - ☐ Students who complain
6. Nine people earn 30000 and one earns 150000. What is the median?

7. An arithmetic sequence starts at 5 with common difference 3. What is the 10th term?

8. 240 rises by 15%, then the new price falls by 15%. What is the final value, to 2 decimal places?

9. What is the present value of 11000 received in 2 years, at 5% a year? Give it to the nearest whole number.

10. What percentage of values lie within two standard deviations of the mean?

2. GAC010 Mathematics II: Probability, Statistics and Finance Answers

· 答案

GAC Mathematics

1. Geometric

A percentage is a factor, not an amount, so each year multiplies by 1.04.

2. Net pay

Net is what actually arrives. A budget built on gross is short by the deductions before it starts.

3. The 8.7% monthly

12970 against 11950. The lower headline rate compounds 36 times instead of 3.

4. Find P(none) and subtract from 1

There is usually one way to get none and many ways to get at least one.

5. Every tenth name on the roll

Only that one gives everyone the same chance, including students who never use the canteen.

6. 30000

Ordered, the middle values are both 30000. The single large value does not move it.

7. 32

$u_{10} = 5 + 9 \times 3 = 32$. Nine steps from the first term, not ten.

8. 234.6

$240 \times 1.15 \times 0.85 = 234.60$. The two percentages act on different amounts.

9. 9977

$11000 \div 1.05^2 = 9977$. It is the compound formula rearranged.

10. 95

68 within one, 95 within two, 99.7 within three. These three answer most questions here.