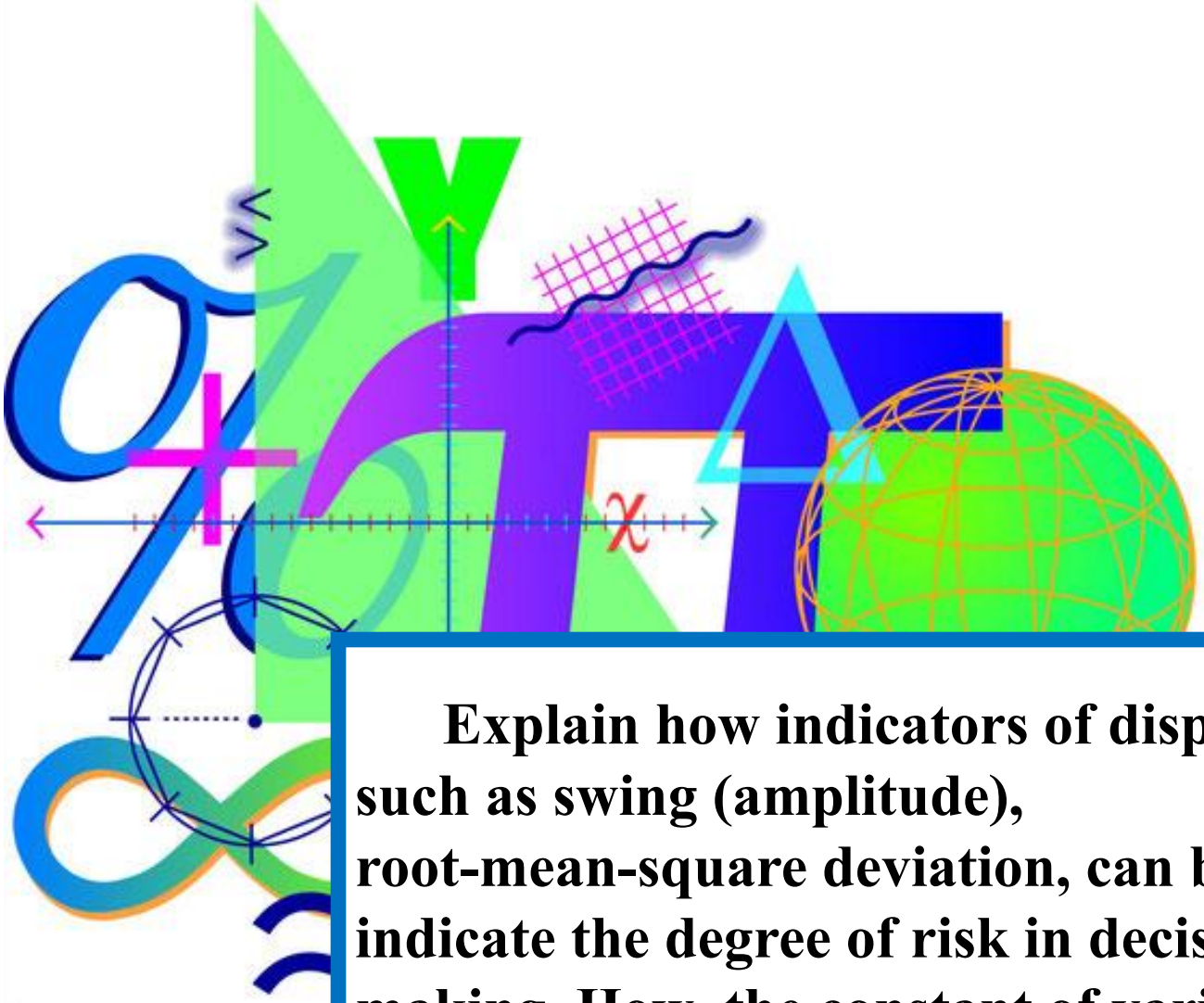
Studying new products, marketing consultant is faced with four alternative factory marks, five possible packaging designs and with three variants of the advertising company.

A. What number of strategies should consider the management of the firm?

B. B. What is the state of the economy and what impact it may have on the choice of a management company?



Explain how indicators of dispersion such as swing (amplitude), root-mean-square deviation, can be used to indicate the degree of risk in decision making. How the constant of variation is used?

Most entrepreneurs are risk-averse.
Why?
What are the factors affecting the function of the risk-profit of the decision-makers?

Under what circumstances the expected value is not enough to get the solution?

What other measurements could we use?

After receiving a bachelor degree Masha got a great position in the international accounting firm. In the first year of employment Masha was able to save $ 6,000 which she placed in a money market Fund. Currently she is studying two investment opportunities.

For the project A the probability of profit with the net present value of $ 3000 equals to 0.20, the probability of profit with the net present value of $ 10,000 is 0.10 and the probability of profit with the net present value of $ 7000. equals to 0.70. For a project B the probability of profit with the net present value of $ 4,000 equals to 0.35, the probability of profit with the net present value of $ 6500 equals to 0.40 and the probability of profit with the net present value of $ 8000 equals to 0.25.

A. What is the estimated current value for each investment?

B. Find the root-mean-square deviation and coefficient of variation for each investment. What investments should be selected?

C. Assume that the total utility of income can be expressed by the equation

$TU = 25X - 3X^2$, **where X is expressed in thousands of dollars. What investments should be selected? Why?**

Explain why the method of the certainty equivalent is considered more preferable than the method of discount rate, adjusted for risk.

Suppose that the firm has an opportunity to invest in two different projects. Using the matrix, find the expected value of future returns, root-mean square deviations. Using the coefficient of variation, specify which investments are more risky, and explain why.

Possibilities Decision matrix

Summarize the logical sequence of steps necessary for making decisions in conditions of risk.

The prices of steel products over the past 11 months according to the statistics :

Month	1	2	3	4	5	6
Price	300	310	312	309	302	305
Month	7	8	9	10	11	12
Prise	304	300	298	305	304	

What is the probability of the next month the price will decrease compared to its last value?

What is the probability of the next month the price will have a value of less than $ 304?

You are given data about 3 investment projects. Identify the least risky project.

Project	Profit	Number of cases, n	Total number of cases, N	Probability, Pi
А	15	7	30	
	30	11	30	
	35	6	30	
	-20	4	30	
	-40	2	30	
Б	65			0.2
	45			0.4
	20			0.1
	-15			0.2
	-25			0.1
В	50	10	60	
	30	15	60	
	15	20	60	
	-10	10	60	
	-20	5	60	

On the basis of calculations for the project the following values were obtained :

- NPV = 3900 rubles.;
- IRR = 30%;
- DPP = 4.5 years.

During the stress test and variables modification influencing the project were obtained new values

Variables	Variables modification	NPV	IRR	DPP
%	10%	3500	25	4,7
FC	8%	3850	21	4,9
Residual value	5%	3800	28	5,3
VC	4%	3400	23	5,1
Sales volume	6%	3100	26	4,6
Price	7%	2600	22	5,2

Conduct a sensitivity analysis of the project according to the criterion of NPV and on the basis of calculations build the rose (star) of project risks.

On the basis of calculations for the project the following values were obtained :

- NPV = 3900 rubles.;
- IRR = 30%;
- DPP = 4.5 years.

During the stress test and variables modification influencing the project were obtained new values

Variables	Variables modification	NPV	IRR	DPP
%	10%	3500	25	4,7
FC	8%	3850	21	4,9
Residual value	5%	3800	28	5,3
VC	4%	3400	23	5,1
Sales volume	6%	3100	26	4,6
Price	7%	2600	22	5,2

Conduct a sensitivity analysis of the project according to the criterion of IRR and on the basis of calculations build the rose (star) of project risks.