

## Seminář 1: Self-check test

1. A bank offers an effective annual rate (EAR) of 12%. Assuming quarterly compounding, the stated annual interest rate is closest to:
- A 11.66%.
  - B 12.55%.
  - C 11.49%.

2. A consultant starts a project today that will last for three years. Her compensation package includes the following:

Year	End-of-Year Payment
1	\$100,000
2	\$150,000
3	\$200,000

If she expects to invest these amounts at an annual interest rate of 3%, compounded annually until her retirement 10 years from now, the value at the end of 10 years is closest to:

- A \$618,994.
- B \$566,466.
- C \$460,590.

3. A portfolio provides the following returns over a five-year period.

Year	1	2	3	4	5
Return	10%	-25%	8%	5%	7%

The compound rate of return of the portfolio across the five-year period is closest to:

- A 0.02%.
- B 1.00%.
- C -9.31%.

4. The returns of a fund are as follows:

Year	Return (%)
1	-20.60
2	15.00
3	0.50
4	9.80
5	4.60

The mean absolute deviation (MAD) of returns for the fund is closest to:

- A 13.69%.
- B 9.53%.
- C 11.91%.

5. Selected information from a company's comparative income statement and balance sheet is presented below:

**Selected Income Statement Data for the Year Ended 31 August (\$ thousands)**

	2013	2012
Sales revenue	100,000	95,000
Cost of goods sold	47,000	47,500
Depreciation expense	4,000	3,500
Net Income	11,122	4,556

**Selected Balance Sheet Data as of 31 August (\$ thousands)**

	2013	2012
<b>Current Assets</b>		
Cash and investments	21,122	25,000
Accounts receivable	25,000	13,500
Inventories	13,000	8,500
Total current assets	59,122	47,000
<b>Current liabilities</b>		
Accounts payable	15,000	15,000
Other current liabilities	7,000	9,000
Total current liabilities	22,000	24,000

The cash collected from customers in 2013 is closest to:

- A \$111,500.
- B \$96,100.
- C \$88,500.

6. Two mutually exclusive projects have the following cash flows (€) and internal rates of return (IRR):

Project	IRR	Year 0	Year 1	Year 2	Year 3	Year 4
A	27.97%	-2,450	345	849	635	3,645
B	28.37%	-2,450	345	849	1,051	3,175

Assuming a discount rate of 8% annually for both projects, the best decision for the firm to make is to accept:

- A both projects.
- B Project B only.
- C Project A only.

7. The following information is available for a firm:

Sales price per unit	€85
Variable cost per unit	€65
Fixed operating costs	€50 million
Fixed financial costs	€30 million

The firm's breakeven quantity of sales (in million units) is closest to:

- A 4.0.
- B 2.5.
- C 1.0.

8. If the following three stocks are held in a portfolio, the portfolio's total return on an equal-weighted basis is closest to:

Stock	Number of Shares Owned	Beginning of Period Price per Share (\$)	End of Period Price per Share (\$)	Dividend per Share during the Period (\$)
A	500	40	37	2.00
B	320	50	52	1.50
C	800	30	34	0.00

- A 3.28%.
- B 5.94%.
- C 6.37%.

9. A company's income statement is provided in the table below:

	2018
Net Revenue	\$22,570
Cost of Goods Sold	\$12,639
Selling Expenses	\$1,467
General and Administrative Expenses	\$2,031
Research and Development	\$722
Amortization	\$630
Interest Revenue	\$37
Interest Expense	\$203
Pretax Income	\$4,914
Income Tax	\$1,179
Net Income	\$3,735

The company's operating profit margin is closest to:

- A 16.55%.
- B 21.77%.
- C 22.51%.a