Note: If the question in the video is labeled with a number, i.e. 1,2,3, please ignore. Questions are labeled in the playlist by number and are in the same order in this pdf.

1. What is the NPV break-even level of sales for a project costing $3,952,000 and generating annual cash flows which are [0.32 x sales - $494,000]? Assume the project will last 10 years and requires a 9.50% rate of return.
a. $3,510,687
b. $1,389,375
c. $877,672
d. $2,778,750
e. $1,966,937

2. Calculate the accounting break-even level of sales units, assuming:
annual fixed costs are $1,401,000; annual depreciation expense is $485,000; sale price per unit is $4,200; and variable costs per unit are $1,800.
a. 584
b. 786
c. 382
d. 318
e. 943

3. A project is expected to have $3.90 million in annual sales for 8 years and a variable cost of 62%. It is also expected that the sales may actually fluctuate by plus or minus 18%. How much could NPV be affected by the sales fluctuation if the cost of capital is 10.70%?
a. $4,527,929
b. $1,387,591
c. $3,651,556
d. $7,303,112
e. $2,775,182

4. A firm with $422,000 in fixed costs and $153,000 depreciation is expected to produce $191,000 in pre-tax profits. If sales increase by 12.50%, then by what percentage would the pre-tax profits increase?
a. 10.01%
b. 37.63%
c. 22.51%
d. 50.13%
e. 40.12%

5. A decision tree shows a 33% probability of $2.90 million in returns and a 67% chance of $1.70 million in returns. What is the maximum that you would invest today in this project if the cash inflows occur in year three in the future and the discount rate is 11.30%?
a. $2,300,000
b. $1,668,178
c. $1,169,398
d. $1,520,218
e. $2,096,000

6. A decision tree for a one-year project that costs $100,000 shows the following possibilities: A 30% best case scenario of $844,000 in returns, a 20% base case scenario of $471,000 in returns, and a 50% worst case scenario of minus $299,000 in returns. If the cash flows occur at the end of the year, what is the project's expected NPV if the discount rate is 6.00%?
a. $97,900
b. $92,358
c. $86,698
d. -$86,698
e. $66,691

7. Suppose cash flows from a project are determined by [0.23 x sales - $431,000], has a 4-year life, and a 12.00% discount rate. What is the initial investment for this project if the NPV break-even occurs at $3.20 million of sales?
a. $712,609
b. $2,235,489
c. $193,833
d. $1,220,000
e. $926,392

8. A four-year project is expected to sell 12,000 units annually at $38.00 per unit. Estimated variable cost is $11.00 per unit, fixed cost is $44,000 per year. Initial cost of the project is $80,000 and straight-line depreciation will be used. The estimates of quantity sold and price may vary by 8.50% (plus or minus), while unit variable cost and fixed cost may vary by 5.10% (plus or minus) from their respective estimates. Calculate the worst-case NPV for this project, assuming a discount rate of 9.30% and a marginal tax rate of 35%.
a. $517,907
b. $693,866
c. $378,907
d. $528,297
e. $420,747

9. Over each of the next 4 years, Dunster Inc. expects to sell 20,400 units of its product at a price of $8 each. Its annual fixed costs are expected to be $18,800 and variable costs $4.50 per unit. Based on an uncertain future, the forecast can vary with sales quantity being 10% higher or lower; variable and fixed costs being 5.00% higher or lower; and selling price 20% higher or lower. Under its best-case scenario, what is the firm's annual pre-tax income?
a. $89,655
b. $56,753
c. $101,633
d. $95,644
e. $76,388

10. ABC Inc. was generating annual sales of $5.60 million with variable costs of $3.90 million, annual fixed costs of $2.40 million, and annual depreciation of $1.50 million. What sales level (in millions) do they need to achieve to achieve accounting break-even assuming fixed costs and depreciation remain the same?
a. $14.52
b. $2.96
c. $12.85
d. $2.29
e. $7.91

11. What is the profitability index for a project costing $250,000 today and providing a net cash inflow of $89,000 annually for 4 years at an opportunity cost of capital of 9% per annum?
A) 0.092
B) 0.122
C) 0.135
D) 0.148
E) 0.153

12. Rilent Inc. is considering a 10 year project that has an initial cost of $X. The project will generate a positive cash flow of $45,000 a year starting in year 1. The project has a 10% cost of capital and a 12% internal rate of return (IRR). What is the project's net present value (NPV)?
A) $ 18,209
B) $ 22,245
C) $ 56,208
D) $ 63,517
E) $ 68,454

13. How much could NPV be affected by a worst-case scenario of 30 percent reduction from the $2.8 million in expected annual cash flows on a seven-year project with 9 percent cost of capital?
A) $2,141,210
B) $2,852,000
C) $3,611,030
D) $4,227,680
E) $5,155,274

14. What is the accounting break-even level of revenues for a firm with $9 million in sales, variable costs of $5.4 million, fixed costs of $3 million, and depreciation of $2 million?
A) $10,837,000
B) $11,005,000
C) $12,150,000
D) $12,500,000
E) $14,120,000

15. Approximately how much of an initial investment was needed in a project that has an NPV break-even level of sales of $6 million, cash flows determined by: 15% × sales - $250,000, an eight-year life, and a 10 percent discount rate?
A) $1,326,757
B) $2,780,003
C) $3,647,702
D) $4,270,143
E) $5,345,000

16. If a firm's DOL is 5.0 when its profit is $2,000,000 and its depreciation is $750,000, how much fixed cost does it have?
A) $7,000,000
B) $7,250,000
C) $7,500,000
D) $7,750,000
E) $8,000,000

17. In 2017 Bald Inc. forecasts $6 million in sales revenue with variable costs of $3.9 million, fixed costs of $1.2 million, and annual depreciation of $1 million. Bald's owner would like to know the minimum sales revenue it needs to generate to achieve break even in accounting terms.
A) $3,384,615
B) $6,100,000
C) $6,285,714
D) $6,557,377
E) $7,563,454

18. ABC Corporation has a 3.8 degree of operating leverage. 2015 was a bad year for ABC as its profits declined by 13.8 percent. Therefore, its sales must have declined by percent.
A) 0.28
B) 2.75
C) 3.63
D) 10.00
E) 13.36

19. What is the most you would be willing to invest in a 6 year project that has an NPV break-even level of sales of $5 million (cash), has variable costs (cash) which are 90% of sales and fixed costs of $300,000 (cash)? The project's required return is 8%. Ignore the impact of tax and depreciation.
A) $416,667
B) $924,576
C) $1,016,678
D) $2,311,450
E) $2,567,455