

✔ **Congratulations! You passed!**

Grade received 100% To pass 80% or higher

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1. Cell **A1** contains a discount rate of 5% per annum, cell **A2** contains an initial investment of -\$1,000 and cells **A3:A5** contain positive cashflows from the end of years 1, 2 and 3 of \$400 each. Which of these statements best describes what the value returned by the following formula represents?

1 / 1 point

=NPV(A1,A3:A5)

- ☐ The net present value at the start of year 1 of all of our cashflows (in and out) related to this investment.
- ☒ The net present value at the start of year 1 of the three future payments of \$400.
- ☐ The net present value at the end of year 1 of the three future payments of \$400.
- ☐ The extra amount we could pay in addition to the initial \$1000 for these future cashflows whilst still earning a rate of return equal to or greater than our discount rate

✔ **Correct**

Yes, this is correct. Remember that the **NPV** function will only discount the cashflows that are contained within the **NPV** function arguments, and will discount them back to 1 period before the first cashflow referenced.

2. If cell **A1** contains a negative cashflow and cells **A2:A4** contain positive cashflows, what can be said about the result of this formula?

1 / 1 point

=IRR(A1:A4)

- ☐ The result will always be a value greater than 0%.
- ☐ The result will be an error since the **IRR** function also needs an interest rate argument.
- ☒ The result will be a value greater than 0 only when the sum of cells **A1:A4** is greater than 0.
- ☐ The result will be an error if the sum of cells **A1:A4** is less than 0.

✔ **Correct**

Yes, this is correct. What this **IRR** formula result tells us is the discount rate at which the net present value of cells **A2:A4** will equal the amount invested at cell **A1**. This discount rate will only be positive provided that the sum of cells **A2:A4** is larger than the amount invested at cell **A1**.

3. If cell **A1** contains a discount rate of 10% per annum, and cells **A2:A121** contain a stream of 120 consecutive monthly payments received over a 10 year period, how could we most easily and accurately find the **Net Present Value** of these payments from the options below?

1 / 1 point

- ☐ Calculate **=NPV(A1, A2:A121) * 12**
- ☒ Calculate **=NPV(A1/12, A2:A121)**
- ☐ Calculate **=NPV(A1, A2:A121) / 12**
- ☐ Calculate **=NPV(A1*12, A2:A121)**

✔ **Correct**

Yes, this is correct. When using the **NPV** function, each payment value is assumed to be separated by one period (in this case a month) and the rate argument used should be expressed in terms of a rate per period length.