1. **Calculate the Payback and ARR and for A and B**
2. **Calculate the NPV for A and B (DR of 5% for A and DR of 3% for B)**

**PROJECT A**

**Net Cash Flow Cumulative NCF**

Year 0 (£10000) (£10,000)

Year 1 5000 (£5,000)

Year 2 5000 £0

Year 3 3000 £3,000

Year 4 1000 £4,000

**Total Return £4000**

**PROJECT B**

**Net Cash Flow Cumulative NCF**

Year 0 (£10000) (£10,000)

Year 1 5000 (£5,000)

Year 2 4000 (£1,000)

Year 3 3000 (£2,000) (1/3 \*12 = 2years + 4 mths)

Year 4 3000 (5,000)

**Total Return £5000**

ARR (%) =

Net Return (Profit) Per Annum

Capital Outlay (Cost)

X 100

**ARR**

|  |  |  |
| --- | --- | --- |
|  | **A** | **B** |
| **Total return** | **£4,000** | **£5,000** |
| **Annual return** | **£1,000** | **£1,250** |
| **ARR** | **10%** | **12.5%** |

**PROJECT A**

**Net Cash Flow DF PV**

Year 0 (£10,000) \* 1 (£10,000)

Year 1 5,000 \* 0.952 4,760

Year 2 5,000 \* 0.907 4,535

Year 3 3,000 \* 0.864 2,592

Year 4 1,000 \* 0.823 823

**Net Present Value £2,710**

**PROJECT B**

**Net Cash Flow DF PV**

Year 0 (£10,000) \* 1 (10,000)

Year 1 5,000 \* 0.971 4,855

Year 2 5,000 \* 0.943 4,715

Year 3 3,000 \* 0.915 2,745

Year 4 3,000 \* 0.888 2,664

**Net Present Value £4,979**

Challenge: Which project would you **recommend** and state **why**?

Super Challenge: **Describe** how the **DF** may have been determined for each project.

Turbo Challenge: **Evaluate** the extent to which investment appraisal is **objective** i.e. not based on qualitative factors.