For the following exercise, complete the calculations below. Evaluate different capital investment appraisal techniques by completing the calculations shown below:

Bongo Ltd. is considering the selection of one of two mutually exclusive projects. Both would involve purchasing machinery with an estimated useful life of 5 years.

Project 1 would generate annual cash flows (receipts less payments) of £200,000; the machinery would cost £556,000 with a scrap value of £56,000.

Project 2 would generate cash flows of £500,000 per annum; the machinery would cost £1,616,000 with a scrap value of £301,000.

Bongo uses straight-line depreciation. Its cost of capital is 15% per annum.

Assume that all cash flows arise on the anniversaries of the initial outlay, that there are no price changes over the project lives, and that accepting either project will have no impact on working capital requirements.

Assess the choice using the following methods by completing the calculations shown below:

* ARR
* NPV
* IRR
* Payback period

**Calculate the missing answers:**

|  |  |  |
| --- | --- | --- |
|  | **Project 1** | **Project 2** |
| **ARR** (see workings) | 33% | ??? |
| **NPV (£’000)** | ??? | 210 |
| **IRR** | 25% | ??? |
| **Payback Period (yrs)** | ??? | 3.2 |

**ARR workings (Project 1)**

|  |  |
| --- | --- |
| Cash flows | 200 |
| Less: depreciation (see below) | 100 |
| Accounting profits | 100 |

These profits are the same each year in this question.

**Annual depreciation (Cost – SV) / 5**

|  |  |
| --- | --- |
| (556,000 – 56,000) / 5 | 100 |

**Average NBV of investments**

|  |  |
| --- | --- |
| (556 + 56) /2 | 306 |
| ARR | 33% |

Be sure to demonstrate your workings.