

Topic: ARR (1)

Q1 Ryan-Hair is a male hairdressing business based in Liverpool. The owner, Ryan Potts, is looking at opening a second shop which, alongside hairdressing, will also offer male grooming services. The total cost of this investment will be £80,000. Ryan is forecasting that the net cash flows will be £26,000 each year, for the next five years.

Activity: Calculate the ARR for the new shop

Your workings:

Q2 Back to Basics is a fitness centre located in the Midlands. Jim, the owner, is looking at expanding the premises and investing in new training equipment. The cost of the investment is estimated to be £130,000. Figure 1 shows the estimated net cash flows.

Year	Net Cash Flow (£)
1	35,000
2	40,000
3	50,000
4	60,000

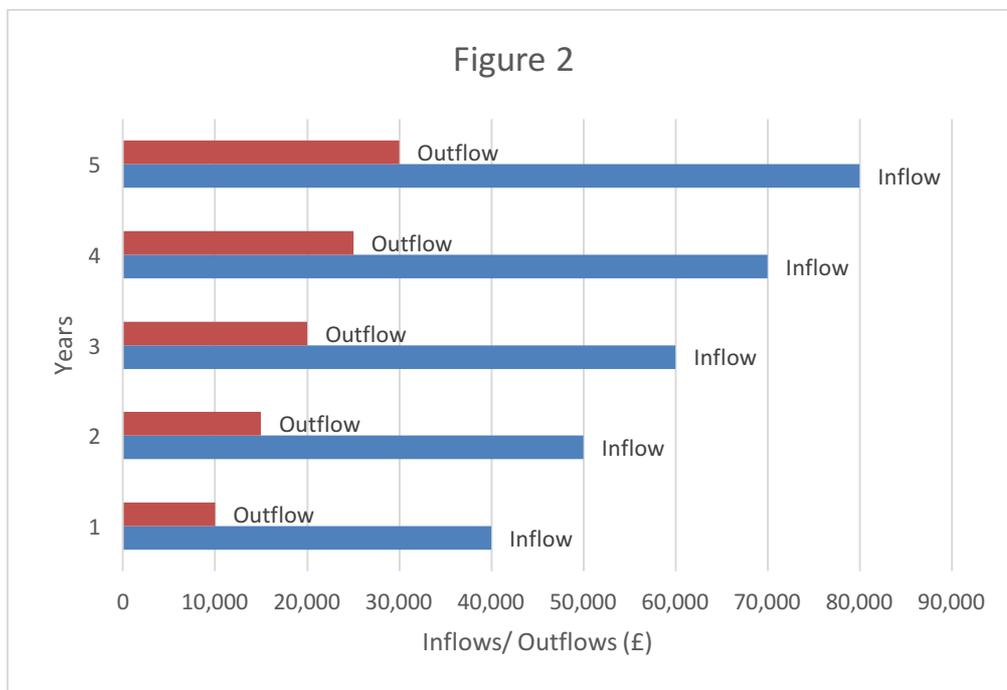
Activity: Calculate the ARR for the proposed expansion and investment

Your workings:

Topic: ARR (1)

Q3

Len Scap works part-time as a wedding photographer in Weardale, in addition to his full-time job working in a local supermarket. Len is considering leaving his job at the supermarket to pursue his dream of becoming a full-time wedding photographer. Len estimates that it will cost him £50,000 to set up his business, "Len Scap photography". Figure 2 shows the estimated inflows and outflows over the next five years.



Activity: Calculate the ARR for the new business

Your workings:

Topic: ARR (1)

Q4

William Wurzel owns a large farm in the Pennines. William is considering investing in a brand new combine harvester and other, more modern agricultural machinery. The total cost of the investment is estimated to be £280,000.

William estimates that the cash inflows from the investment over the next 7 years will be £66,000 per annum, with outflows estimated to be $\frac{1}{8}$ th of the yearly cash inflows.

Activity: Calculate the ARR of the proposed investment

Your workings:

Topic: ARR (1) - Answers

Q1 Ryan-Hair is a male hairdressing business based in Liverpool. The owner, Ryan Potts, is looking at opening a second shop which, alongside hairdressing, will also offer male grooming services. The total cost of this investment will be £80,000. Ryan is forecasting that the net cash flows will be £26,000 each year, for the next five years.

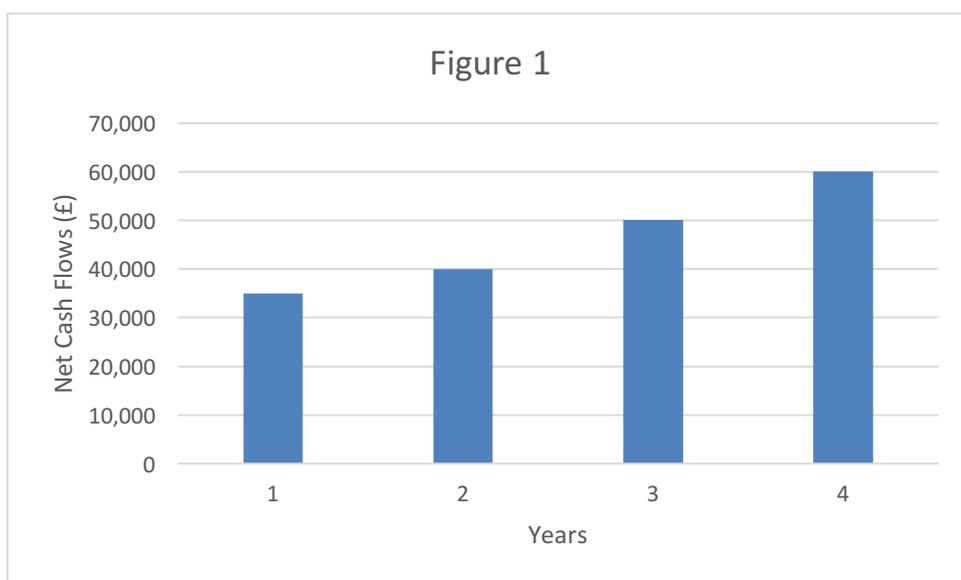
Activity: Calculate the ARR for the new shop

Total return = $(£26,000 \times 5) - £80,000 = £50,000$

Average annual return = $£50,000 / 5 = £10,000$

ARR = $(£10,000 / £80,000) \times 100 = 12.5\%$

Q2 Back to Basics is a fitness centre located in the Midlands. Jim, the owner, is looking at expanding the premises and investing in new training equipment. The cost of the investment is estimated to be £130,000. Figure 1 shows the estimated net cash flows.



Activity: Calculate the ARR for the proposed expansion and investment

Total return = $(£35,000 + £40,000 + £50,000 + £60,000) - £130,000 = £55,000$

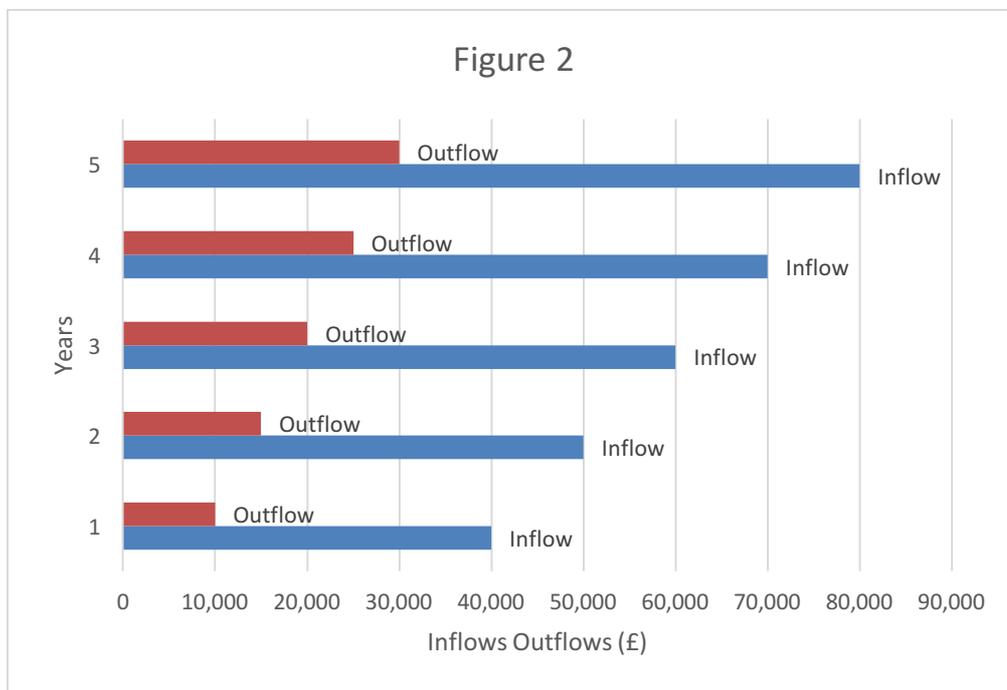
Average annual return = $£55,000 / 4 = £13,750$

ARR = $(£13,750 / £130,000) \times 100 = 10.58\%$ (rounded)

Topic: ARR (1) - Answers

Q3

Len Scap works part-time as a wedding photographer in Weardale, in addition to his full-time job working in a local supermarket. Len is considering leaving his job at the supermarket to pursue his dream of becoming a full-time wedding photographer. Len estimates that it will cost him £50,000 to set up his business, "Len Scap photography". Figure 2 shows the estimated inflows and outflows over the next five years.



Activity: Calculate the ARR for the new business

Net cash flows:

Year 1: £40,000 - £10,000 = £30,000

Year 2: £50,000 - £15,000 = £35,000

Year 3: £60,000 - £20,000 = £40,000

Year 4: £70,000 - £25,000 = £45,000

Year 5: £80,000 - £30,000 = £50,000

Total return = (£30,000 + £35,000 + £40,000 + £45,000 + £50,000) - £50,000 = £150,000

Average annual return = £150,000 / 5 = £30,000

ARR = (£30,000 / £50,000) x 100 = 60%

Topic: ARR (1) - Answers

Q4	<p>William Wurzel owns a large farm in the Pennines. William is considering investing in a brand new combine harvester and other, more modern agricultural machinery. The total cost of the investment is estimated to be £280,000.</p> <p>William estimates that the cash inflows from the investment over the next 7 years will be £66,000 per annum, with outflows estimated to be $1/8^{\text{th}}$ of the yearly cash inflows.</p> <p>Activity: Calculate the ARR of the proposed investment</p>
<p>Yearly net outflows = $£66,000 / 8 = £8,250$</p> <p>Total net cash flows = $(£66,000 - £8,250) \times 7 = £404,250$</p> <p>Total return = $£404,250 - £280,000 = £124,250$</p> <p>Average annual return = $£124,250 / 7 = £17,750$</p> <p>ARR = $(£17,750 / £280,000) \times 100 = 6.34\%$ (rounded)</p>	