1. What project(s) will you accept with (a) payback period with cutoff of 2.8 years? (b) discounted payback with cutoff of 3 years? (c) NPV? Assume the cost of capital is 10%?

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2. Find the NPV and IRR for the following problems, should you accept the project? Assuming that the required rate of return of the investors is 10%.
   (a) $I_0 = 5,000$, one lump-sum cash flow $10,000$ will be received 6 years from now?
   (b) $I_0 = 5,000$, one lump-sum cash flow $10,000$ will be received 6 ½ years from now?
   (c) $I_0 = 5,000$, one lump-sum cash flow $10,000$ will be received 6 3/4 years from now?

3. Find the NPV and IRR for the following problems, should you accept the project? Assuming that the required rate of return of the investors is 12%.
   (a) $I_0 = 10,000$, a level cash flows of $1,000 per year (end-of-year) for 15 years?
   (b) $I_0 = 10,000$, a level cash flows of $400 per quarter (end-of-quarter) for 15 years?
   (c) $I_0 = 10,000$, a level cash flows of $100 per month (end-of-month) for 15 years?
   (d) $I_0 = 10,000$, a level cash flows of $2,000 every two years (end-of-period) for 16 years?

4. Find the NPV and IRR for the following problems, should you accept the project? Assuming that the required rate of return of the investors is 10%.
   (a) $I_0 = 10,000$, a level cash flows of $1,000 per year (end-of-year) for 15 years and the project will be liquidated for $2,000 at the end of year 15?
   (b) $I_0 = 10,000$, a level cash flows of $400 per quarter (end-of-quarter) for 15 years and the project will be liquidated for $1,000 at the end of year 15?
(c) $I_0 = $10,000, a level cash flows of $100 per month (end-of-month) for 15 years
the project will be liquidated for $1,000 at the end of year 15?
(d) $I_0 = $10,000, a level cash flows of $2,000 every two years (end-of-period) for 16
years the project will be liquidated for $5,000 at the end of year 16?

5. Find the NPV for the following problems, should you accept the project? Assuming
the required rate of return of the investors is 10%.
(a) $I_0 = $10,000, a continuous cash flows of $1,000 per year for 15 years?
(b) $I_0 = $10,000, a continuous cash flows of $1,000 per year for 15 years and the
project will be liquidated for $5,000 at the end of year 15?

6. Find the NPV for the following problems, should you accept the project? Assuming
the required rate of return of the investors is 10%.
(a) $I_0 = $10,000, a level cash flows of $1,250 per year (end-of-year) forever? Also
find IRR?
(b) $I_0 = $10,000, a level cash flows of $1,250 per year (middle-of-year) forever?
(c) $I_0 = $10,000, a level cash flows of $1,250 per year (end-of-3rd quarter) forever?

7. Find the NPV and IRR for the following problems, should you accept the
project? Assuming that the required rate of return of the investors is 15%.
(a) $I_0 = $10,000, infinite cash flows with $1,000 at the end of first year, the cash
flows increase at a 6% annual rate forever?
(b) $I_0 = $10,000, infinite cash flows has $300 at the end of the first quarter, the cash
flows increase at a 1.5% quarterly rate forever?
(c) $I_0 = $10,000, the end-of-first-year cash flow is $1,000. The cash flows will
increase at a 5% annual rate for the next 14 years, find NPV only?

8. (a) Find the IRR for an investment of $1,000 today that will return $2,000 after 10
years?
(b) An investment of $1,000 will return $60/year forever, what is the IRR?
(c) An investment of $1,000 will return $60 at the end of the first year, then the CF
will grow at 2%/year rate forever, what is the IRR?
(d) An investment of $1,000 will return $60/year for 30 years, what is the IRR?
(e) An investment of $1,000 will return $60/year for 30 years and a scrap value of
$100 at the end of year 30, what is the IRR?
(f) An investment of $1,000 will return $60/year for 30 years and a scrap value of
$1,000 at the end of year 30, what is the IRR?
9. Consider two projects with different lives that must be repeated. Both generate the same revenue but have the following costs:

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If k=7%, which project should be selected?

10. Two mutually exclusive projects with different lives that will be repeated will have the following cash flows:

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If k=10%, which project should be selected?