

MBA 630 Spring 2018 - Hill: MBA 630 Spring 2018 - Hill



Chapter 8 Homework

instructions | help

1. value:
20.00 points

The Sweetwater Candy Company would like to buy a new machine that would automatically "dip" chocolates. The dipping operation is currently done largely by hand. The machine the company is considering costs \$120,000. The manufacturer estimates that the machine would be usable for five years but would require the replacement of several key parts at the end of the third year. These parts would cost \$9,000, including installation. After five years, the machine could be sold for \$7,500.

The company estimates that the cost to operate the machine will be \$7,000 per year. The present method of dipping chocolates costs \$30,000 per year. In addition to reducing costs, the new machine will increase production by 6,000 boxes of chocolates per year. The company realizes a contribution margin of \$1.50 per box. A 20% rate of return is required on all investments.

Click here to view [Exhibit 8B-1](#) and [Exhibit 8B-2](#), to determine the appropriate discount factor(s) using tables.

Required:

1. What are the annual net cash inflows that will be provided by the new dipping machine?

Reduction in annual operating costs:	
Operating costs, present hand method	\$ 30,000
Operating costs, new machine	7,000
Annual savings in operating costs	23,000
Increased annual contribution margin	9,000
Total annual net cash inflows	\$ 32,000

2. Compute the new machine's net present value. (Any cash outflows should be indicated by a minus sign. Round discount factor(s) to 3 decimal places.)

	Now	1	2	3	4	5
Purchase of machine		\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000
Annual net cash inflows						
Replacement parts				(9,000)		
Salvage value of machine						7,500
Total cash flows	\$ 0	\$ 32,000	\$ 32,000	\$ 23,000	\$ 32,000	\$ 39,500
Discount factor (20%)	0.000	0.833	0.694	0.579	0.482	0.402
Present value	0	26,656	22,208	13,317	15,424	15,879
Net present value	\$ 93,484					

References eBook & Resources

Worksheet

Difficulty: 1 Easy

Learning Objective: 08-02 Evaluate the acceptability of an investment project using the net present value method.

[Check my work](#)