

JK Co

(W1) REVENUE

Year	1	2	3	4
Selling Price ($\times 1.04$)	20.80	21.63	22.50	23.40
Units	36000	52000	75000	36000
Revenue	748800	1124760	1687500	842400

(W2) VARIABLE COSTS

Year	1	2	3	4
Variable Costs ($\times 1.05$)	12.60	13.23	13.89	14.59
Units	36000	52000	75000	36000
Total VC	453600	687960	1041750	525240

(W3) Working Capital

Time	0	1	2	3	4
Revenue		748800	1124760	1687500	842400
Working CAP At 8%	59904	89982	135000	67392	—
Incremental	(59904)	(30078)	(45018)	67608	67392

(W4) CAPITAL ALLOWANCES (STRAIGHTLINE)

Year 1-4 $\frac{101}{4} \times 30\% = 82500$ TAX BENEFIT

	0	1	2	3	4
MACHINE COST	(1100000)				
REVENUE		748800	1124760	1687500	842400
VARIABLE COSTS		(453600)	(687960)	(1041750)	(525240)
TAXABLE PROFIT	—	295200	436800	645750	317160
TAX AT 30%	—	(88560)	(131040)	(193725)	(95148)
CAPITAL ACCS TAX BENEFITS		82500	82500	82500	82500
WORKING CAPITAL	(59904)	(30078)	(45018)	67608	67392
NET CASHFLOW	(1159904)	259062	343242	602133	371904
10% DF	1	0.909	0.826	0.751	0.683
PRESENT VALUE	(1159904)	235488	283518	452202	254010

$$NPV = \$65314$$

∴ ACCEPT

(B)

0 1 2 3 4

CASH FLOW (1159904) 259062 343242 602133 371904

15% DF 1 0.870 0.756 0.658 0.572

PRESENT VALUE (1159904) 225384 259491 396204 212729

$$NPV = \underline{\underline{-66096}}$$

$$IRR = 10 + \left[\frac{65314}{65314 + 66096} \times 5 \right]$$

$$= \underline{\underline{12.5\%}}$$