

PORTMAN CO

(W1) EXPECTED SELLING PRICE

$$= (28 \times 25\%) + (33 \times 45\%) + (36 \times 30\%)$$

$$= \underline{\underline{\$32.65}}$$

(W2) REVENUE

YEAR	0	1	2	3	4
UNITS		210000	210000	340000	340000
SELLING PRICE	32.65	33.96	35.32	36.73	38.20
TOTAL REVENUE (1000)		7132	7417	12488	12988

(W3) OVERHEADS

YEAR	0	1	2	3	4
'000	(500)	(550)	(605)	(666)	(733)

(W4) CAPITAL ALLOWANCES

	' 000
COST	7000
SCRAP	(900)
	<u>6100</u>

$$6100 \div 4 = 1525$$

TAX BENEFIT AT 30% =

' 000
457.5

(A)

YEAR	0	1	2	3	4
REVENUE		7132	7417	12488	12988
VAR COSTS		(2575)	(4325)	(7105)	(5825)
FIXED COSTS		(550)	(605)	(666)	(733)
PROFIT		4007	2487	4717	6430
TAX AT 30%		(1202)	(746)	(1415)	(1929)
C.A.'s		458	457	458	457
COST SCRAP	(7000)				900
NET CASH FLOW	(7000)	3263	2198	3760	5858
8% D.F.	1	0.926	0.857	0.794	0.735
PRESENT VALUE	(7000)	3022	1884	2985	4306

$$NPV = \$5197,000$$

∴ ACCEPT

(B) Tax A Discount Factor of 18%

Year	0	1	2	3	4
C/F (7000)		3263	2198	3760	5858
18% DF	<u>1</u>	0.847	0.718	0.609	0.516
PV (7000)		2764	1578	2290	3023

NPV = \$2655,000

$$IRR = R_1 + \left[\frac{N_1}{N_1 - N_2} \times (R_2 - R_1) \right]$$

$$= 8 + \left[\frac{5197}{5197 - 2655} \times (18 - 8) \right]$$

= 28%