***Exercise 1:***

***Jarvis Golf Company sells a special putter for $20 each. In March, it sold 28,000 putters while manufacturing 30,000. There was no beginning inventory on March 1. Production information for March was:***

***Direct manufacturing labor per unit 15 minutes***

***Fixed selling and administrative costs $ 40,000***

***Fixed manufacturing overhead 120,000***

***Direct materials cost per unit 2***

***Direct manufacturing labor per hour 24***

***Variable manufacturing overhead per unit 4***

***Variable selling expenses per unit 2***

***Required (SHOW DETAILS):***

1. ***Compute the cost per unit under both absorption and variable costing.***

|  |  |
| --- | --- |
| ***Absorption Costing*** | ***Variable Costing*** |
| ***DM = 2******DL = 6******Var. Manuf = 4******Fixed & Adm = $4******Product cost = 16*** | ***DM = 2******DL = 6******Var. Manuf = 4******Fixed & Adm = $0******Product cost = 12*** |

1. ***Compute the ending inventories under both absorption and variable costing.***

|  |  |
| --- | --- |
| ***Absorption Costing*** | ***Variable Costing*** |
| ***Ending Inv. (30k – 28k) = 2k******2k \* $16 = 32k*** | ***Ending Inv. (30k – 28k) = 2k******2k \* $12 = 24k*** |

1. ***Compute operating income under both absorption and variable costing.***

***ABSORPTION COSTING***

|  |  |
| --- | --- |
| ***Sales*** | ***28k \* $20 = 560k*** |
| ***CGS*** | ***28K \* $16 = 448K*** |
| ***Gross. P*** | ***560k – 448 = 112k*** |
| ***Selling & Adm*** | ***40k + $2 \* 28k = 96k*** |
| ***Operating Income*** | ***112 – 96k = 16k*** |

***VARIABLE COSTING***

|  |  |
| --- | --- |
| ***Sales*** | ***28k \* $20 = 560k*** |
| ***Var CGS*** | ***28k \* $12 = 336k*** |
| ***Var Seling*** | ***28k \* $2 = 168k*** |
| ***Fixed MOH*** | ***120k*** |
| ***Fixed Selling & Adm***  | ***40k*** |
| ***Operating Income*** | ***3k*** |

***Exercise 2:***

***A company, which started operations in 2018, has $25 per unit selling price, $7.00 per unit in variable production cost and $2.00 per unit in variable selling and administrative cost. The annual fixed production cost is $450,000. The annual fixed selling and administrative cost is $50,000.***

***A. Complete the table below for each year. Assume a FIFO flow.***

|  |  |  |
| --- | --- | --- |
|  | ***2018*** | ***2019*** |
| ***Units Produced*** | ***120,000*** | ***150,000*** |
| ***Units Sold*** | ***110,000*** | ***155,000*** |
| ***Units in ending inventory*** | ***10K*** | ***5K all produced by 2019*** |
| ***Manufacturing cost per unit******(under full-absorption costing)*** | ***7+{450K/120K} = $10.75*** | ***7+{450K/150K} = $10*** |
| ***Operating income under variable costing*** | ***Sales: {110k\*25} = 2,750,000******Less: Var CGS: {110K\*7} = 770K******Var Selling Exp: {110k\*2} = 220k******Cont. Margin: 1,760,000******Less: Fixed MOH = 450k******Fixed Selling & Adm = 50k******Operating Income = 1,260,000*** | ***Sales: {155k\*25} = 3,875,000******Less: Var CGS: {155k\*7} = 1, 085,000******Var Selling Exp: {155k\*2} = 310k******Cont. Margin: 2,480,00******Less: Fixed MOH = 450k******Fixed Selling & Adm = 50k******Operating Income = 1,980,000*** |
| ***Operating income under full-absorption costing*** | ***Sales: {110k\*25} = 2,750,000******Less CGS: {110k\*10.75} = 1,182,500******Gross. P: 2,750,000-1,182,500 = 156,500******Less: Selling & Adm exp: 50k + {$2\*110,000} = 270k******Operating Income = 1,297,500*** | ***Sales: {155k\*25} = 3,875,000******Less: CGS {10k\*10.75} + {145k\*10} = 1,557,500******Gross. P: 2,317,500******Less: Selling $ Adm Exp: 50k + {2\*155k} = 360k******Operating Income = 1,957,500*** |
| ***Ending inventory using variable costing*** | ***{10k\*$7} = 70k*** | ***{5k\*$7} =35k*** |
| ***Ending inventory using full-absorption costing***  | ***{10k\*$10.75} = 107,500*** | ***{5k\*$10} = 50k*** |