1. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

Production data for month follow:

Direct labour cost incurred	£215,000
Actual manufacturing overhead cost incurred	£145,000
Direct materials purchases	£160,000

Newcastle applies the manufacturing overhead cost to jobs at the rate of 75% of the direct labour cost incurred. This rate has been used for many years. The company does not close the under- or over applied manufacturing overhead to the Cost of Goods Sold until the end of the year.

Newcastle Company's cost of goods manufactured for January was:

- ○ £499,000.
- ○ £497,000.
- ○ £490,250.
- → ○ £527,250.

Opening direct material	£80,000
Add: Purchases	160,000
Less: Closing direct material	78,000
Direct material consumed	£162,000
Direct material consumed	£162,000
Add: Direct labour	215,000
Add: Manufacturing overhead (75% × £215,000)	161,250
Total manufacturing cost	£538,250
Total manufacturing cost	£538,250
Add: Opening work in process	155,000
Less: Closing work in process	166,000

Cost of goods manufactured	£527,250

References

Multiple Choice Difficulty: Intermediate

2. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

→ ○ overapplied by £16,250.

○ underapplied by £16,250.

○ overapplied by £12,000.

○ underapplied by £12,000.

Manufacturing overhead cost applied (75% × £215,000) (a)	£161,250
Actual manufacturing overhead (b)	145,000
Manufacturing overhead overapplied (a – b)	£ 16,250

References

Multiple Choice Difficulty: Intermediate

3. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

Production data for month follow:

Direct labour cost incurred	£215,000
Actual manufacturing overhead cost incurred	£145,000
Direct materials purchases	£160,000

Newcastle applies the manufacturing overhead cost to jobs at the rate of 70% of the direct labour cost incurred. This rate has been used for many years. The company does not close the under- or overapplied manufacturing overhead to the Cost of Goods Sold until the end of the year. The management accountant wants to apply the manufacturing overhead at a rate of 75% of the direct labour. The managing director wants to know how this change will affect reported profit. (Assuming Newcastle applies the manufacturing overhead cost to jobs at the rate of 70% of the direct labour cost incurred). Newcastle Company's cost of goods manufactured for January was:

- ○ £499,000.
- ○ £497,000.
- ○ £490,000.
- → ○ £516,500.

Opening direct material	£80,000
Add: Purchases	160,000
Less: Closing direct material	78,000
Direct material consumed	£162,000
Direct material consumed	£162,000
Add: Direct labour	215,000
Add: Manufacturing overhead (70% × £215,000)	150,500
Total manufacturing cost	£527,500
Total manufacturing cost	£527,500
Add: Opening work in process	155,000

Less: Closing work in process	166,000
Cost of goods manufactured	£516,500

References

Multiple Choice Difficulty: Intermediate

4. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

Production data for month follow:

Direct labour cost incurred	£215,000
Actual manufacturing overhead cost incurred	£145,000
Direct materials purchases	£160,000

Newcastle applies the manufacturing overhead cost to jobs at the rate of 70% of the direct labour cost incurred. This rate has been used for many years. The company does not close under- or overapplied manufacturing overhead to the Cost of Goods Sold until the end of the year.
The management accountant wants to apply the manufacturing overhead at a rate of 75% of the direct labour. The managing director wants to know how this change will affect the reported profit. (Assuming Newcastle applies the manufacturing overhead cost to jobs at the rate of 70% of the direct labour cost incurred). Newcastle Company's Cost of Goods Sold for January was:

- ○ £512,000.
- → ○ £518,500.
- ○ £522,000.
- ○ £496,000.

Opening direct material	£80,000
Add: Purchases	160,000
Less: Closing direct material	78,000
Direct material consumed	£162,000
Direct material consumed	£162,000
Add: Direct labour	215,000
Add: Manufacturing overhead (70% × £215,000)	150,500
Total manufacturing cost	£527,500
Total manufacturing cost	£527,500
Add: Opening work in process	155,000

Less: Closing work in process	166,000
Cost of goods manufactured	£516,500
Cost of goods manufactured	£516,500
Add: Opening finished goods	90,000
Less: Closing finished goods	88,000
Cost of goods sold for January	£518,500

References

Multiple Choice Difficulty: Basic

5. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

Production data for month follow:

Direct labour cost incurred	£215,000
Actual manufacturing overhead cost incurred	£145,000
Direct materials purchases	£160,000

→ ○ overapplied by £5,500.

○ underapplied by £5,500.

○ overapplied by £12,000.

○ underapplied by £12,000.

Manufacturing overhead (70% × £215,000) (a)	£150,500
Actual manufacturing overhead (b)	145,000
Manufacturing overhead overapplied (a – b)	£ 5,500

References

Multiple Choice Difficulty: Intermediate

6. value: 2.00 points

Newcastle Company's beginning and ending inventories for the month of January were as follows:

	January 1	January 31
Direct Materials	£80,000	£78,000
Work in Process	£155,000	£166,000
Finished Goods	£90,000	£88,000

Production data for month follow:

Direct labour cost incurred	£215,000
Actual manufacturing overhead cost incurred	£145,000
Direct materials purchases	£160,000

Newcastle applies the manufacturing overhead cost to jobs at the rate of 70% of the direct labour cost incurred. This rate has been used for many years. The company does not close under- or overapplied manufacturing overhead to Cost of Goods Sold until the end of the year.
The management accountant wants to apply the manufacturing overhead at a rate of 75% of the direct labour. The managing director wants to know how this change will affect reported profit. (Assuming Newcastle applies the manufacturing overhead cost to jobs at the rate of 75% of the direct labour cost incurred). Newcastle Company's Cost of Goods Sold for January was:

- ○ £512,000.
- → ○ £529,250.
- ○ £522,000.
- ○ £496,000.

Opening direct material	£80,000
Add: Purchases	160,000
Less: Closing direct material	78,000
Direct material consumed	£162,000
Direct material consumed	£162,000
Add: Direct labour	215,000
Add: Manufacturing overhead (75% × £215,000)	161,250
Total manufacturing cost	£538,250
Total manufacturing cost	£538,250
Add: Opening work in process	155,000

Less: Closing work in process	166,000
Cost of goods manufactured	527,250
Add: Opening finished goods	90,000
Less: Closing finished goods	88,000
Cost of goods sold for January	£529,250

References

Multiple Choice Difficulty: Basic

7. value: 2.00 points

Birk applies overhead to jobs at a predetermined rate of 80% of direct labour cost. The total manufacturing cost of the Job No. 5, the only job still in process on April 30, from the job cost sheet is £8,800. It has been charged with direct Labour of £2,000. What was the amount of direct materials charged to Job No. 5?

- ○ £3,000
- → ○ £5,200
- ○ £8,800
- ○ £24,000

Direct labour charged to Job No. 5 (a)	£2,000
Overhead charged to Job No.5 (b)	1,600
Total manufacturing cost charged to Job No. 5 (c)	8,800
Direct material charged to Job No. 5 (c – b – a)	£5,200

References

Multiple Choice Difficulty: Basic

8. value: 2.00 points

Axe applies overhead to jobs at a predetermined rate of 80% of direct labour cost. The total manufacturing cost of the Job No. 9, the only job still in process on March 31, from the job cost sheet is £4,400. It has been charged with direct labour of £1,000. The amount of direct materials charged to Job No. 9 was:

- ○ £12,000.
- ○ £4,400.
- → ○ £2,600.
- ○ £1,500.

Total manufacturing cost of Job No. 9 in process (a)	£4,400
Direct labour (b)	1000
Overhead (c) (£1,000 × 80%)	800
Direct material (a – b – c)	£2,600

References

Multiple Choice Difficulty: Intermediate

9. value: 2.00 points

Nil Co. uses a predetermined overhead rate based on direct labour cost to apply manufacturing overhead to jobs. For the year ended December 31, Nil's estimated manufacturing overhead was £600,000, based on an estimated volume of 50,000 direct labour hours, at a direct labour rate of £6.00 per hour. Actual manufacturing overhead amounted to £620,000, with the actual direct labour cost of £325,000. For the year, the manufacturing overhead was:

- ○ overapplied by £20,000.
- ○ underapplied by £22,000.
- → ○ overapplied by £30,000.
- ○ underapplied by £30,000.

Estimated manufacturing overhead	£600,000
Estimated direct labour hours	50,000 hours
Direct labour cost (50,000 direct labour hours × £6.00)	£300,000
Predetermined overhead rate (£600,000/£300,000) × 100	200%
Actual direct labour cost	£325,000
Applied manufacturing overhead (a) (200% × £325,000)	£650,000
Actual manufacturing overhead (b)	620,000
Overapplied manufacturing overhead (a – b)	£30,000

References

Multiple Choice Difficulty: Intermediate

10. value: 2.00 points

In computing its predetermined overhead rate, Brady Company included its factory insurance cost twice. This error will result in:

- the ending balance of Finished Goods to be understated.
- the credits to the Manufacturing Overhead account to be understated.
- → the Cost of Goods Manufactured to be overstated.
- the Operating profit to be overstated.

As the predetermined overhead rate includes factory insurance cost twice, the Cost of Goods Manufactured to be overstated.

References

Multiple Choice Difficulty: Intermediate

11. value: 10.00 points

Len's Furniture has been manufacturing furniture for the last couple of years. The machinery used to manufacture the furniture are highly technical, as a result, most of the product costs of manufacturing furniture consist of overheads. The company estimated its yearly budgeted overhead cost to be R1,200,000 with an estimated 800,000 machine hours. The company uses a predetermined overhead rate per machine hour to apply overhead cost to work-in-progress.

The company actually spent R1,385,000 during the year and the actual machine hours recorded were 785,000.

Required:
1. Calculate the predetermined overhead rate. **(Round your answer to 2 decimal places.)**

Predetermined overhead rate	R	1.50

2.	In the current year overheads were	under	applied.

3. Calculate the over- /under application of overheads for the year.

Overheads for the year	R	207,500	under application

4.	The overspending of R185,000 will lead to an	under	application of	R	185,000

5.	The decrease in capacity of 15,000 machine hours will lead to an	under	application of	R	22,500

Explanation:

1. R1 200,000 / 800,000 = R1.50

2. Overheads were under-applied, since R1,177,500 (R1.50 × 785,000) were applied, but the actual costs were higher at R1,385,000.

3. (785,000 × R1.50) – R1,385,000 = R207,500 under application

4. An overspending of R185,000 will increase the actual overhead rate, which means that the budgeted rate were too low and as a result will lead to an under-application.

5. The decreased capacity will increase the actual overhead rate, which means that the budgeted rate were too low and as a result will lead to an under-application.

References

Worksheet Difficulty: Intermediate

12. value: 2.00 points

Paceheco Company uses the weighted-average method in its process costing system. The Moulding Department is the second department in its production process. The data below summarize the department's operations in January.

	Units	Per cent Complete
Beginning work in process inventory	5,100	50%
Transferred in from the prior department during April	59,000	
Completed and transferred to the next department during January	56,800	
Ending work in process inventory	7,300	40%

The accounting records indicate that the conversion cost that had been assigned to beginning work in process inventory was £34,558 and a total of £559,254 in conversion costs were incurred in the department during January.
What was the cost per equivalent unit for conversion costs for January in the Moulding Department? (Round off to three decimal places.)

- ○ £9.479
- → ○ £9.943
- ○ £9.680
- ○ £8.435

As per the weighted average method, the cost per equivalent unit for conversion costs = (Cost of beginning Work in process inventory + Cost added during the period)/Equivalent units of production = (£34,558 + £5,59,254)/(56,800 units + 7,300 units × 40%) = £5,93,812/59,720 units = £9.943.

References

Multiple Choice Difficulty: Intermediate

13. value: 2.00 points

Bradford Electronics uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month is listed below:

Beginning work in process inventory:	
Units in beginning work in process inventory	700
Materials costs	£8,000
Conversion costs	£7,800
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	35%
Units started into production during the month	5,200
Units transferred to the next department during the month	4,400
Materials costs added during the month	£90,300
Conversion costs added during the month	£125,600
Ending work in process inventory:	
Units in ending work in process inventory	1,500
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	30%

Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What is the closest cost per equivalent unit for materials for the month in the first processing department?

- ○ £16.66
- ○ £15.31
- ○ £17.53
- → ○ £19.09

Cost per equivalent unit for material for the month:

Units transferred to next department (a)	4,400 units

Equivalent units in closing work in progress (b) (1,500 units × 50%)	750 units
Total equivalent units for material (a + b)	5,150 units
Material cost in beginning work in progress(A)	£8,000
Material added during the period(B)	£90,300
Total cost (A + B)	£98,300
Per unit cost (£98,300/5,150 units)	£19.09

References

Multiple Choice Difficulty: Advanced

14. value: 2.00 points

Bradford Electronics uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month is listed below:
Beginning work in process inventory:

Beginning work in process inventory:	
Units in beginning work in process inventory	700
Materials costs	£8,000
Conversion costs	£7,800
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	35%
Units started into production during the month	5,200
Units transferred to the next department during the month	4,400
Materials costs added during the month	£90,300
Conversion costs added during the month	£125,600
Ending work in process inventory:	
Units in ending work in process inventory	1,500
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	30%

Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. Determine the closest cost per equivalent unit for conversion costs for the first department for the month.

- ○ £28.89
- ○ £22.61
- → ○ £27.51
- ○ £25.90

Cost per equivalent unit for the conversion cost:

Equivalent units for conversion cost:	
Units Transferred to next department (a)	4,400

	units
Equivalent units in closing work in progress (b) 1,500 units × 30%	450 units
Total equivalent units (a + b)	4,850 units
Conversion cost in the beginning work in progress(A)	£7,800
Conversion cost added during the period(B)	125,600
Total(A + B)	£133,400
Cost per equivalent unit (£133,400/4,850 units)	£27.51

References

Multiple Choice Difficulty: Advanced

15. value: 2.00 points

Bradford Electronics uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month is listed below:
Beginning work in process inventory:

Beginning work in process inventory:	
Units in beginning work in process inventory	700
Materials costs	£8,000
Conversion costs	£7,800
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	35%
Units started into production during the month	5,200
Units transferred to the next department during the month	4,400
Materials costs added during the month	£90,300
Conversion costs added during the month	£125,600
Ending work in process inventory:	
Units in ending work in process inventory	1,500
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	30%

Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What is the closest total cost transferred from the first processing department to the next processing department during the month?

- ○ £231,700
- ○ £274,893
- → ○ £205,005
- ○ £215,900

	Material	Conversion cost
Units transferred to next department (a)	4,400	4,400
Equivalent units in closing work in progress (b)	750	450
Total equivalent units (a + b)	5,150	4,850

Cost in beginning work in progress(a)	£8,000	£7,800
Cost added during the period(b)	90,300	125,600
Total cost (a + b)	£98,300	£133,400
Per unit cost (£98,300/5,150 units), (£133,400/4,850 units)	£19.087	£27.505
Total cost per equivalent unit (£19.087 + £27.505)	£46.59	
Cost transferred to next processing department (4,400 units × £46.59)	£205,005	

References

Multiple Choice Difficulty: Intermediate

16. value: 2.00 points

Bradford Electronics uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month is listed below:
Beginning work in process inventory:

Beginning work in process inventory:	
Units in beginning work in process inventory	700
Materials costs	£8,000
Conversion costs	£7,800
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	35%
Units started into production during the month	5,200
Units transferred to the next department during the month	4,400
Materials costs added during the month	£90,300
Conversion costs added during the month	£125,600
Ending work in process inventory:	
Units in ending work in process inventory	1,500
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	30%

Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What is the closest cost of ending work in process inventory in the first processing department according to the company's cost system?

- → ○ £26,692
- ○ £69,888
- ○ £34,944
- ○ £20,966

	Material	Conversion cost
Units transferred to next department (a)	4,400	4,400
Equivalent units in closing work in progress (b)	750	450
Total equivalent units (a + b)	5,150	4,850

Cost in beginning work in progress(a)	£8,000	£7,800
Cost added during the period(b)	90,300	125,600
Total cost (a + b)	£98,300	£133,400
Per unit cost (£98,300/5,150 units), (£133,400/4,850 units)	£19.087	£27.505
Units in ending work in progress	750	450
Cost of ending work in progress (£19.087 × 750 units), (£27.505 × 450 units)	£14,315	£12,377
Total cost (£14,315 + £12,377)	£26,692	

References

Multiple Choice Difficulty: Intermediate

17. value: 2.00 points

Bradford Electronics uses the weighted-average method in its process costing system. Data concerning the first processing department for the most recent month is listed below:
Beginning work in process inventory:

Beginning work in process inventory:	
Units in beginning work in process inventory	700
Materials costs	£8,000
Conversion costs	£7,800
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	35%
Units started into production during the month	5,200
Units transferred to the next department during the month	4,400
Materials costs added during the month	£90,300
Conversion costs added during the month	£125,600
Ending work in process inventory:	
Units in ending work in process inventory	1,500
Percentage complete with respect to materials	50%
Percentage complete with respect to conversion	30%

Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What are the equivalent units for materials for the month in the first processing department?

- 750 units
- 5,900 units
- 4,400 units
- → 5,150 units

Equivalent units for materials:	
Units transferred to next department (a)	4,400
Equivalent units for materials in closing work in progress (b)	750
Equivalent units for materials (a +b)	5,150

References

Multiple Choice Difficulty: Intermediate

18. value: 2.00 points

Norfolk Engineering uses the weighted-average method in its process costing system. This month, the beginning inventory in the first processing department consisted of 700 units. The costs and percentage completion of these units in beginning inventory were:

	Cost	Per cent Complete
Materials costs	£12,000	65%
Conversion costs	£2,000	10%

A total of 9,200 units were started and 8,300 units were transferred to the second processing department during the month. The following costs were incurred in the first processing department during the month:

Materials costs	£200,800
Conversion costs	£225,500

The ending inventory was 75% complete with respect to materials and 15% complete with respect to conversion costs.
Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. Determine the closest total cost transferred from the first processing department to the next processing department during the month.

- ○ £485,486
- → ○ £407,024
- ○ £426,300
- ○ £440,300

Cost transferred from first processing department to next:	Material	Conversion cost
Units transferred to next department (a)	8,300	8,300
Closing work in progress (b)	1,200	240
Total equivalent units (a + b)	9,500	8,540
Cost in opening work in process	£12,000	£2,000
Cost incurred in the first department	200,800	225,500
Total cost	£212,800	£227,500
Cost per equivalent unit	£22.400	£26.639
Total cost per equivalent unit (£22.400 + £26.639)	£49.039	

Cost transferred from first processing department to the next processing department	£407,024

References

Multiple Choice Difficulty: Intermediate

19. value: 2.00 points

Norfolk Engineering uses the weighted-average method in its process costing system. This month, the beginning inventory in the first processing department consisted of 700 units. The costs and percentage completion of these units in beginning inventory were:

	Cost	Per cent Complete
Materials costs	£12,000	65%
Conversion costs	£2,000	10%

A total of 9,200 units were started and 8,300 units were transferred to the second processing department during the month. The following costs were incurred in the first processing department during the month:

Materials costs	£200,800
Conversion costs	£225,500

→ ○ £22.40

○ £20.28

○ £21.14

○ £21.49

Cost per equivalent unit for material	
Units transferred to next department (a)	8,300
Closing work in progress (b) (700 units + 9,200 units – 8,300 units) × 75%	1,200
Total equivalent units(a + b)	9,500
Cost in opening work in process (a)	£12,000
Cost incurred in the first department (b)	200,800
Total cost (a + b)	£212,800
Cost per equivalent unit (£212,800/9,500 units)	£22.400

References

Multiple Choice Difficulty: Intermediate

20. value: 2.00 points

Norfolk Engineering uses the weighted-average method in its process costing system. This month, the beginning inventory in the first processing department consisted of 700 units. The costs and percentage completion of these units in beginning inventory were:

	Cost	Per cent Complete
Materials costs	£12,000	65%
Conversion costs	£2,000	10%

A total of 9,200 units were started and 8,300 units were transferred to the second processing department during the month. The following costs were incurred in the first processing department during the month:

Materials costs	£200,800
Conversion costs	£225,500

The ending inventory was 75% complete with respect to materials and 15% complete with respect to conversion costs.
Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What is the closest cost per equivalent unit for conversion costs for the first department for the month?

→ ○ £26.64

○ £26.41

○ £27.97

○ £22.98

Cost per equivalent unit for conversion cost	
Units transferred to next department(a)	8,300
Closing work in progress(b) (700 units + 9,200 units – 8,300 units) × 15%	240
Total equivalent units (a + b)	8,540
Cost in opening work in process (a)	£2,000
Cost incurred in the first department (b)	225,500
Total cost (a + b)	£227,500
Cost per equivalent unit (£227,500/8,540 units)	£26.64

References

Multiple Choice Difficulty: Intermediate

21. value: 2.00 points

Norfolk Engineering uses the weighted-average method in its process costing system. This month, the beginning inventory in the first processing department consisted of 700 units. The costs and percentage completion of these units in beginning inventory were:

	Cost	Per cent Complete
Materials costs	£12,000	65%
Conversion costs	£2,000	10%

A total of 9,200 units were started and 8,300 units were transferred to the second processing department during the month. The following costs were incurred in the first processing department during the month:

Materials costs	£200,800
Conversion costs	£225,500

The ending inventory was 75% complete with respect to materials and 15% complete with respect to conversion costs.
Note: Your answers may differ from those offered below due to rounding error. In all cases, select the answer that is the closest to the answer you computed. To reduce rounding error, carry out all computations to at least three decimal places. What is the closest cost per equivalent whole unit for the month in the first processing department?

- ○ £44.47
- ○ £53.05
- → ○ £49.04
- ○ £51.98

Cost transferred from first processing department to next:	Material	Conversion cost
Units transferred to next department	8,300	8,300
Add: Closing work in progress (9,200 units + 700 units – 8,300 units) × 75%, (9,200 units + 700 units – 8,300 units) × 15%	1,200	240
Total equivalent units	9,500	8,540
Cost in opening work in process	£12,000	£2,000
Add: Cost incurred in the first department	200,800	225,500
Total cost	£212,800	£227,500
Cost per equivalent unit	£22.40	£26.64
Total cost per equivalent unit (£22.40 + £26.64)	£49.04	

References

Multiple Choice Difficulty: Intermediate

22. value: 10.00 points

Bottles for Africa has been manufacturing plastic bottles for the last couple of years. The company uses a process costing system under the weighted average method to calculate equivalent units and costs per unit. Materials are added at the beginning of the process whilst conversion costs are allocated evenly over the process. The following information is available for the past month:

Work-in-progress opening balance (500 bottles 70% complete)	R7,750
Direct materials	R2,500
Conversion costs	R5,250
Types of costs incurred:	
Direct materials opening balance	R500
Direct materials purchased	R50,000
Direct materials closing balance	R1,000
Conversion cost incurred	R580,000
Conversion cost issued to production	R600,000
Number of bottles completed	25,000
Work-in-progress closing balance (750 bottles 50% complete)	?

Required:

1. Calculate the equivalent number of units completed for both direct materials and conversion cost.

Direct materials	25,750	units
Conversion costs	25,375	units

2. Calculate the direct material and conversion cost per equivalent unit. **(Round your answers to 2 decimal places.)**

Direct materials	R	2.02	per equivalent unit
Conversion cost	R	23.85	per equivalent unit

3. Calculate the closing balance of Work-in-progress. **(Round your answer to 2 decimal places.)**

Work-in-progress	R	10,458.75

Explanation:

1. Direct materials: 25,000 + 750 = 25,750 units
   Conversion costs: [25,000 + (750 × 50%) = 25,375

2. Direct materials: [(R500 + R50,000 – R1,000) + R2,500] / 25,750 = R2.02
   Conversion cost: [R600,000 + R5,250] / 25,375 = R23.85

3. (750 × R2.02) + (750 × 50% × R23.85) = R1,515 + R8,943.75 = R10,458.75

References

Worksheet Difficulty: Intermediate