

```
BLOCK entry {  
  IF $SELECT NOT EXISTS(SELECT 1 FROM orders AS o WHERE o.o_orderkey = {0})$[orderkey]  
  THEN STOP  
  ELSE GOTO falsey0  
}
```

```
BLOCK falsey0 {  
  current_item <- $SELECT MAX(l.l_linenumber) FROM lineitem AS l WHERE l.l_orderkey = {0}$[orderkey];  
  GOTO loop_head  
}
```

```
BLOCK loop_head {  
  IF ${0} < 1$[current_item]  
  THEN STOP  
  ELSE GOTO falsey1  
}
```

```
BLOCK falsey1 {  
  lineitem <- $SELECT (l.l_partkey, l.l_suppley, l.l_quantity)  
    FROM lineitem AS l  
    WHERE l.l_orderkey = {0}  
    AND l.l_linenumber = {1}$[orderkey, current_item];  
  GOTO inter2  
}
```

```
BLOCK inter2 {  
  cur_supplier <- $SELECT (ps.ps_suppley, ps.ps_supplycost)  
    FROM partsupp AS ps  
    WHERE ps.ps_partkey = {0}.l_partkey  
    AND ps.ps_suppley = {0}.l_suppley$[lineitem];  
  min_supplier <- $SELECT (ps.ps_suppley, ps.ps_supplycost)  
    FROM partsupp AS ps  
    WHERE ps.ps_partkey = {0}.l_partkey  
    AND ps.ps_availqty >= {0}.l_quantity  
    ORDER BY ps.ps_supplycost, ps.ps_suppley  
    LIMIT 1$[lineitem];  
  GOTO inter4  
}
```

```
BLOCK inter4 {  
  IF ${0}.ps_suppley <> {1}.ps_suppley$[cur_supplier, min_supplier]  
  THEN GOTO truthy2  
  ELSE GOTO merge2  
}
```

```
BLOCK truthy2 {  
  EMIT ${  
    part: {0}.l_partkey,  
    savings: (1 - {2}.ps_supplycost / {1}.ps_supplycost) * 100,  
    old_supp: {1}.ps_suppley,  
    new_supp: {2}.ps_suppley  
  }$[lineitem, cur_supplier, min_supplier];  
  GOTO merge2  
}
```

```
BLOCK merge2 {  
  current_item <- ${0} - 1$[current_item];  
  JUMP loop_head  
}
```