

```
BLOCK entry {  
  IF $SELECT NOT EXISTS(SELECT 1 FROM orders AS o WHERE o.o_orderkey = {0})${orderkey}  
  THEN GOTO truthy0  
  ELSE GOTO falsey0  
}
```

```
BLOCK truthy0 {  
  STOP  
}
```

```
BLOCK falsey0 {  
  current_item <- $SELECT MAX(l.l_linenumbr) FROM lineitem AS l WHERE l.l_orderkey = {0}${orderkey};  
  GOTO inter0  
}
```

```
BLOCK inter0 {  
  GOTO loop_head  
}
```

```
BLOCK loop_head {  
  IF ${0} < 1${current_item}  
  THEN GOTO truthy1  
  ELSE GOTO falsey1  
}
```

```
BLOCK truthy1 {  
  GOTO loop_exit  
}
```

```
BLOCK loop_exit {  
  GOTO merge0  
}
```

```
BLOCK merge0 {  
  STOP  
}
```

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

```
BLOCK inter2 {  
  cur_supplier <- $SELECT (ps.ps_suppkey, ps.ps_supplycost)  
    FROM partsupp AS ps  
    WHERE ps.ps_partkey = {0}.l_partkey  
    AND ps.ps_suppkey = {0}.l_suppkey${lineitem};  
  GOTO inter3  
}
```

```
BLOCK inter3 {  
  min_supplier <- $SELECT (ps.ps_suppkey, ps.ps_supplycost)  
    FROM partsupp AS ps  
    WHERE ps.ps_partkey = {0}.l_partkey  
    AND ps.ps_availqty >= {0}.l_quantity  
    ORDER BY ps.ps_supplycost, ps.ps_suppkey  
    LIMIT 1${lineitem};  
  GOTO inter4  
}
```

```
BLOCK inter4 {  
  IF ${0}.ps_suppkey <> {1}.ps_suppkey${cur_supplier, min_supplier}  
  THEN GOTO truthy2  
  ELSE GOTO falsey2  
}
```

```
BLOCK truthy2 {  
  EMIT ${  
    part: {0}.l_partkey,  
    savings: (1 - {2}.ps_supplycost / {1}.ps_supplycost) * 100,  
    old_supp: {1}.ps_suppkey,  
    new_supp: {2}.ps_suppkey  
  }${lineitem, cur_supplier, min_supplier};  
  GOTO inter5  
}
```

```
BLOCK inter5 {  
  GOTO merge2  
}
```

```
BLOCK falsey2 {  
  GOTO merge2  
}
```

```
BLOCK merge2 {  
  current_item <- ${0} - 1${current_item};  
  GOTO inter6  
}
```

```
BLOCK inter6 {  
  GOTO merge1  
}
```

```
BLOCK merge1 {  
  JUMP loop_head  
}
```