

```
BLOCK entry {  
  n <- $SELECT COUNT(*) :: int FROM lineitem AS l WHERE l.l_orderkey = {0}$[orderkey];  
  GOTO inter0  
}
```

```
BLOCK inter0 {  
  IF ${0} = 0 OR capacity < (SELECT MAX(p.p_size) FROM lineitem AS l, part AS p WHERE l.l_orderkey = {1} AND l.l_partkey = p.p_partkey)${n, orderkey}  
  THEN GOTO truthy0  
  ELSE GOTO falsey0  
}
```

```
BLOCK truthy0 {  
  STOP  
}
```

```
BLOCK falsey0 {  
  items <- ${1} << {0} - 1${n};  
  GOTO inter1  
}
```

```
BLOCK inter1 {  
  GOTO outer_head  
}
```

```
BLOCK outer_head {  
  IF ${0} = 0${items}  
  THEN GOTO truthy1  
  ELSE GOTO falsey1  
}
```

```
BLOCK truthy1 {  
  STOP  
}
```

```
BLOCK falsey1 {  
  max_size <- ${0}$[];  
  GOTO inter2  
}
```

```
BLOCK inter2 {  
  max_subset <- ${0}$[];  
  GOTO inter3  
}
```

```
BLOCK inter3 {  
  subset <- ${0} & ~{0}${items};  
  GOTO inter4  
}
```

```
BLOCK inter4 {  
  GOTO inner_1_head  
}
```

```
BLOCK inner_1_head {  
  size <- $SELECT SUM(p.p_size) FROM lineitem AS l, part AS p WHERE l.l_orderkey = {0} AND {1} & (1 << l.l_linenum - 1) <> 0 AND l.l_partkey = p.p_partkey${orderkey, subset};  
  GOTO inter5  
}
```

```
BLOCK inter5 {  
  IF ${0} <= {1} AND {0} > {2}${size, capacity, max_size}  
  THEN GOTO truthy2  
  ELSE GOTO falsey2  
}
```

```
BLOCK truthy2 {  
  max_size <- ${0}${size};  
  GOTO inter6  
}
```

```
BLOCK inter6 {  
  max_subset <- ${0}${subset};  
  GOTO inter7  
}
```

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

```
BLOCK inter7 {  
  GOTO merge2  
}
```

```
BLOCK merge2 {  
  IF ${0} = {1}${subset, items}  
  THEN GOTO truthy3  
  ELSE GOTO falsey3  
}
```

```
BLOCK falsey3 {  
  subset <- ${0} & ({1} - {0})${items, subset};  
  GOTO inter9  
}
```

```
BLOCK truthy3 {  
  GOTO inner_1_exit  
}
```

```
BLOCK inter9 {  
  GOTO merge3  
}
```

```
BLOCK inner_1_exit {  
  pack <- '${}$[]';  
  GOTO inter10  
}
```

```
BLOCK merge3 {  
  JUMP inner_1_head  
}
```

```
BLOCK inter10 {  
  linenum <- ${0}$[];  
  GOTO inter11  
}
```

```
BLOCK inter11 {  
  GOTO inner_2_head  
}
```

```
BLOCK inner_2_head {  
  linenum <- ${0} + 1${linenum};  
  GOTO inter12  
}
```

```
BLOCK inter12 {  
  IF ${0} > {1}${linenum, n}  
  THEN GOTO truthy4  
  ELSE GOTO falsey4  
}
```

```
BLOCK truthy4 {  
  GOTO inner_2_exit  
}
```

```
BLOCK falsey4 {  
  IF ${0} & (1 << {1} - 1) <> 0${max_subset, linenum}  
  THEN GOTO truthy5  
  ELSE GOTO falsey5  
}
```

```
BLOCK inner_2_exit {  
  EMIT ${0}${pack};  
  GOTO inter16  
}
```

```
BLOCK truthy5 {  
  pack <- ${0} || '#'${pack};  
  GOTO inter14  
}
```

```
BLOCK falsey5 {  
  pack <- ${0} || '.'${pack};  
  GOTO inter15  
}
```

```
BLOCK inter16 {  
  items <- ${0} & ({1} - 1${items, max_subset};  
  GOTO inter17  
}
```

```
BLOCK inter14 {  
  GOTO merge5  
}
```

```
BLOCK inter15 {  
  GOTO merge5  
}
```

```
BLOCK inter17 {  
  GOTO merge1  
}
```

```
BLOCK merge5 {  
  GOTO merge4  
}
```

```
BLOCK merge1 {  
  JUMP outer_head  
}
```

```
BLOCK merge4 {  
  JUMP inner_2_head  
}
```