

1)

```
SELECT DISTINCT S.sname
FROM Suppliers AS S, Parts AS P, Catalog AS C
WHERE P.color = 'Red' AND P.pid = C.pid AND C.sid = S.sid
```

Data Output		Explain
sname		
character varying (50)		
1	Wiley E. Coyote	
2	Yosemite Sham	

2)

```
SELECT DISTINCT S.sid
FROM Suppliers AS S, Parts AS P, Catalog AS C
WHERE (P.color = 'Red' OR P.color = 'Green') AND P.pid = C.pid AND C.sid = S.sid
```

Data Output		Ex
sid		
[PK] integer		
1		1
2		2

3)

```
SELECT DISTINCT S.sid
FROM Suppliers AS S, Parts AS P, Catalog AS C
WHERE (P.color = 'Red' AND S.address = '221 Packer Street' AND
      P.color = 'Green' AND P.pid = C.pid AND C.sid = S.sid)
```

Data Output		E
sid		
[PK] integer		

4)

```
SELECT C.sid
FROM Catalog as C,
(
  SELECT *
  FROM Parts
  WHERE color = 'Red' or color = 'Green'
) P
WHERE C.pid = P.pid group by C.sid having count(*) =
(
  SELECT COUNT(*)
  FROM Parts
  WHERE color = 'Red' or color = 'Green'
)
```

Data Output	
	sid integer
1	1

5)

```
(SELECT C.sid
FROM Catalog as C,
(
  SELECT *
  FROM Parts
  WHERE color = 'Red'
) P
WHERE C.pid = P.pid group by C.sid having count(*) =
(
  SELECT COUNT(*)
  FROM Parts
  WHERE color = 'Red'
))
UNION
(SELECT C.sid
FROM Catalog as C,
(
  SELECT *
  FROM Parts
  WHERE color = 'Green'
) P
WHERE C.pid = P.pid group by C.sid having count(*) =
```

```
(
SELECT COUNT(*)
FROM Parts
WHERE color = 'Green'
))
```

Data Output	
	sid integer
1	1
2	2

6)

```
SELECT C1.sid, C2.sid
FROM Catalog as C1 INNER JOIN Catalog as C2 ON C1.pid = C2.pid and
C1.cost > C2.cost
```

Data Output		Explain
	sid integer	sid integer
1	1	2
2	2	1
3	1	2

7)

```
SELECT DISTINCT C1.pid
FROM Catalog as C1 INNER JOIN Catalog as C2 ON C1.pid = C2.pid and C1.sid
!= C2.sid
```

Data Output	
	pid integer
1	1
2	3
3	5

8)

```
SELECT sid, AVG(cost)
FROM Catalog as C INNER JOIN Parts as P ON C.pid = P.pid
WHERE color = 'Red' or color = 'Green' group by sid
```

Data Output			Explain	Messages
	sid integer	avg double precision		
1	1	27.5		
2	2	30.333333333333332		

9)

```
SELECT DISTINCT C.sid
FROM Suppliers AS S, Parts AS P, Catalog AS C
WHERE (C.cost >= 50.00)
```

Data Output	
	sid integer
1	1