Problem 1.

```sql
SELECT
    subquery.MerchantName,
    subquery.ProductName
FROM (
    SELECT
        sell.mid,
        sell.pid,
        Merchants.mid AS MerchantID,
        Products.pid AS ProductID,
        Merchants.name AS MerchantName,
        Products.name AS ProductName,
        sell.quantity_available
    FROM
        Products
    INNER JOIN sell ON sell.pid = Products.pid
    INNER JOIN Merchants ON Merchants.mid = sell.mid
    WHERE
        sell.quantity_available = 0
) AS subquery;
```

MerchantName	ProductName
Acer	Router
Acer	Network Card
Apple	Printer
Apple	Router
HP	Router
HP	Super Drive
HP	Laptop
Dell	Router
Lenovo	Ethernet Adapter

Problem 2.

```sql
from Merchants left join sell
on Merchants.MID = sell.MID right join Products
on sell.PID = Products.PID
where sell.MID is null
```

name	description
Super Drive	External CD/DVD/RW
Super Drive	UInternal CD/DVD/RW

Problem 3:

```
select count(distinct customers.fullname)
from customers left join place
on customers.CID = place.CID right join orders
on orders.oid = place.oid left join contain
on orders.oid = contain.oid right join Products
on contain.PID = Products.PID
where Products.description = '2TB Internal SATA'
and Products.name != 'Router'
```

count(distinct customers.fullna...
19

Problem 4:

```sql
UPDATE sell
JOIN Merchants ON Merchants.MID = sell.MID
JOIN Products ON Products.PID = sell.PID
SET sell.price = sell.price * .8
WHERE Merchants.name = 'HP'
and Products.name = 'Networking';
```

Problem 5:

	Monitor	1435.38	
	Router	521.07	
	Router	1256.57	
	Monitor	1103.47	
	Super Drive	356.13	
	Printer	1345.37	
	Super Drive	671.75	
	Super Drive	1135.30	
	Super Drive	356.13	
	Super Drive	1015.95	
	Network C…	405.40	
	Hard Drive	836.99	
	Super Drive	1124.26	
	Network C…	609.20	
	Printer	1345.37	
	Network C…	405.40	
	Super Drive	671.75	
	Super Drive	1135.30	
	Router	945.51	
	Hard Drive	333.71	
	Laptop	247.96	
	Router	394.04	

```
select Products.name, sell.price
from customers join place on customers.CID = place.CID
join orders on place.oid = orders.oid
join contain on orders.oid = contain.oid
join Products on contain.PID = Products.PID
join sell on Products.PID = sell.PID
join Merchants on Merchants.MID = sell.MID
where customers.fullname = 'Uriel Whitney'
and Merchants.name = 'Acer'
```

Problem 6:

sum(sell.pric...	name
1043186.45	Acer
1159579.61	Apple
910924.97	HP
1179941.56	Dell
1224107.95	Lenovo

```
select sum(sell.price), Merchants.name
from customers join place on customers.CID = place.CID
join orders on place.oid = orders.oid
join contain on orders.oid = contain.oid
join Products on contain.PID = Products.PID
join sell on Products.PID = sell.PID
join Merchants on Merchants.MID = sell.MID
group by Merchants.name
```

Problem 7:

```sql
select Merchants.name as "Merchant", sum(sell.price * sell.quantity_available) as "Total sales", year(place.order_date) as "Date"
from Merchants
join sell on Merchants.MID = sell.MID
join contain on sell.PID = contain.PID
join place on contain.OID = place.OID
group by Merchants.name, year(place.order_date)
having sum(sell.price * sell.quantity_available) >= all
    (
    select sum(sell.price * sell.quantity_available)
    from Merchants
    join sell on Merchants.MID = sell.MID
    join contain on sell.PID = contain.PID
    join place on contain.OID = place.OID
    group by Merchants.name, year(place.order_date)
    );
```

Merchant	Total sales	Date
Dell	2601060.96	2018

Problem 8:

shipping_meth...	avg(orders.shipping_c...
USPS	7.442828
UPS	7.438824
FedEx	7.664192

Problem 9:

```sql
Select Merchants.name, Products.category, sum(sell.price)
from customers
JOIN place ON customers.CID = place.CID
JOIN orders ON place.oid = orders.oid
JOIN contain ON orders.oid = contain.oid
JOIN Products ON contain.PID = Products.PID
JOIN sell ON Products.PID = sell.PID
JOIN Merchants ON Merchants.MID = sell.MID
group by Merchants.name, Products.category
```


```sql
Select Merchants.name, Products.category, sum(sell.price)
from customers
JOIN place ON customers.CID = place.CID
JOIN orders ON place.oid = orders.oid
JOIN contain ON orders.oid = contain.oid
JOIN Products ON contain.PID = Products.PID
JOIN sell ON Products.PID = sell.PID
JOIN Merchants ON Merchants.MID = sell.MID
group by Merchants.name, Products.category
```


Problem 10:

```sql
SELECT subquery.name, subquery.fullname, MAX(subquery.totalspent) as max_totalspent

FROM (
    SELECT Merchants.name, customers.fullname, SUM(sell.price) AS totalspent
    FROM customers
    JOIN place ON customers.CID = place.CID
    JOIN orders ON place.oid = orders.oid
    JOIN contain ON orders.oid = contain.oid
    JOIN Products ON contain.PID = Products.PID
    JOIN sell ON Products.PID = sell.PID
    JOIN Merchants ON Merchants.MID = sell.MID
    GROUP BY customers.fullname, Merchants.name
) AS subquery
GROUP BY subquery.name, subquery.fullname;
```

name	fullname	max_totalspe...
Acer	Uriel Whitney	60092.61
Apple	Uriel Whitney	72772.41
HP	Uriel Whitney	58775.17
Dell	Uriel Whitney	80037.04
Len...	Uriel Whitney	74848.00
Apple	Justin Mccray	52943.17
HP	Justin Mccray	42447.73
Dell	Justin Mccray	54091.34
Len...	Justin Mccray	63598.33
Acer	Justin Mccray	43350.07
Apple	Wynne Mcki...	35712.07
HP	Wynne Mcki...	26323.69
Dell	Wynne Mcki...	32851.57
Len...	Wynne Mcki...	36796.82
Acer	Wynne Mcki...	34390.73
Acer	Harlan Barrera	46610.02
HP	Harlan Barrera	41364.90