```
-- 1. Select the names of all the products in the store.
    ANS:
    mysql> select name from products;
    +-----------------+
    | name            |
    +-----------------+
    | Hard drive      |
    | Memory          |
    | ZIP drive       |
    | Floppy disk     |
    | Monitor         |
    | DVD drive       |
    | CD drive        |
    | Laser Printer   |
    | Toner cartridge |
    | DVD burner      |
    | Loudspeakers    |
    +-----------------+

-- 2. Select the names and the prices of all the products in the store.
    ANS:
    mysql> select name, price from products;
    +-----------------+-------+
    | name            | price |
    +-----------------+-------+
    | Hard drive      |   240 |
    | Memory          |   120 |
    | ZIP drive       |   150 |
    | Floppy disk     |     5 |
    | Monitor         |   240 |
    | DVD drive       |   180 |
    | CD drive        |    90 |
    | Laser Printer   |   270 |
    | Toner cartridge |    66 |
    | DVD burner      |   180 |
    | Loudspeakers    |    70 |
    +-----------------+-------+

-- 3. Select the name of the products with a price less than or equal to $200.
    ANS:
    mysql> select name from products where price <= 200;
    +-----------------+
    | name            |
    +-----------------+
    | Memory          |
    | ZIP drive       |
    | Floppy disk     |
    | DVD drive       |
    | CD drive        |
    | Toner cartridge |
```

```
    | DVD burner      |
    | Loudspeakers    |
    +-----------------+
-- 4. Select all the products with a price between $60 and $120.
    ANS:
    mysql> select * from products where price between 60 and 120;
    +------+-----------------+-------+--------------+
    | Code | Name            | Price | Manufacturer |
    +------+-----------------+-------+--------------+
    |    2 | Memory          |   120 |            6 |
    |    7 | CD drive        |    90 |            2 |
    |    9 | Toner cartridge |    66 |            3 |
    |   11 | Loudspeakers    |    70 |            2 |
    +------+-----------------+-------+--------------+

-- 5. Select the name and price in cents (i.e., the price must be multiplied by
100).
    ANS:
    mysql> select name,price*100 as  price_in_cents from products;
    +-----------------+----------------+
    | name            | price_in_cents |
    +-----------------+----------------+
    | Hard drive      |          24000 |
    | Memory          |          12000 |
    | ZIP drive       |          15000 |
    | Floppy disk     |            500 |
    | Monitor         |          24000 |
    | DVD drive       |          18000 |
    | CD drive        |           9000 |
    | Laser Printer   |          27000 |
    | Toner cartridge |           6600 |
    | DVD burner      |          18000 |
    | Loudspeakers    |           7000 |
    +-----------------+----------------+

-- 6. Compute the average price of all the products.
    ANS:
    mysql> select avg(price) from products;
    +--------------------+
    | avg(price)         |
    +--------------------+
    | 146.45454545454547 |
    +--------------------+

-- 7. Compute the average price of all products with manufacturer code equal to 2.
    ANS:
    mysql> select avg(price) from products where manufacturer = 2;
    +------------+
    | avg(price) |
    +------------+
```

```
|        130 |
+------------+
```

-- 8. Compute the number of products with a price larger than or equal to $180.

ANS:

```
mysql> select count(*) from products where price >= 180;
+----------+
| count(*) |
+----------+
|        5 |
+----------+
```

-- 9. Select the name and price of all products with a price larger than or equal to $180, and sort first by price (in descending order), and then by name (in ascending order).

ANS:

```
mysql> select name,price from products where price >= 180 order by price desc, name asc;
+---------------+-------+
| name          | price |
+---------------+-------+
| Laser Printer |   270 |
| Hard drive    |   240 |
| Monitor       |   240 |
| DVD burner    |   180 |
| DVD drive     |   180 |
+---------------+-------+
```

-- 10. Select all the data from the products, including all the data for each product's manufacturer.

ANS:

```
mysql> SELECT * FROM Products LEFT JOIN Manufacturers ON Products.Manufacturer = Manufacturers.Code;
+------+-----------------+-------+--------------+------+-----------------+
| Code | Name            | Price | Manufacturer | Code | Name            |
+------+-----------------+-------+--------------+------+-----------------+
|    1 | Hard drive      |   240 |            5 |    5 | Fujitsu         |
|    2 | Memory          |   120 |            6 |    6 | Winchester      |
|    3 | ZIP drive       |   150 |            4 |    4 | Iomega          |
|    4 | Floppy disk     |     5 |            6 |    6 | Winchester      |
|    5 | Monitor         |   240 |            1 |    1 | Sony            |
|    6 | DVD drive       |   180 |            2 |    2 | Creative Labs   |
|    7 | CD drive        |    90 |            2 |    2 | Creative Labs   |
|    8 | Laser Printer   |   270 |            3 |    3 | Hewlett-Packard |
|    9 | Toner cartridge |    66 |            3 |    3 | Hewlett-Packard |
|   10 | DVD burner      |   180 |            2 |    2 | Creative Labs   |
|   11 | Loudspeakers    |    70 |            2 |    2 | Creative Labs   |
+------+-----------------+-------+--------------+------+-----------------+
```

-- 11. Select the product name, price, and manufacturer name of all the products.

ANS:

```
mysql> SELECT Products.Name, Price, Manufacturers.Name FROM Products INNER JOIN
Manufacturers ON Products.Manufacturer = Manufacturers.Code;
+----------------+-------+----------------+
| Name           | Price | Name           |
+----------------+-------+----------------+
| Hard drive     |   240 | Fujitsu        |
| Memory         |   120 | Winchester     |
| ZIP drive      |   150 | Iomega         |
| Floppy disk    |     5 | Winchester     |
| Monitor        |   240 | Sony           |
| DVD drive      |   180 | Creative Labs  |
| CD drive       |    90 | Creative Labs  |
| Laser Printer  |   270 | Hewlett-Packard |
| Toner cartridge |    66 | Hewlett-Packard |
| DVD burner     |   180 | Creative Labs  |
| Loudspeakers   |    70 | Creative Labs  |
+----------------+-------+----------------+
```

-- 12. Select the average price of each manufacturer's products, showing only the manufacturer's code.

ANS:

```
mysql> select avg(price),manufacturer from products group by manufacturer;
+------------+--------------+
| avg(price) | manufacturer |
+------------+--------------+
|        240 |            1 |
|        130 |            2 |
|        168 |            3 |
|        150 |            4 |
|        240 |            5 |
|       62.5 |            6 |
+------------+--------------+
```

-- 13. Select the average price of each manufacturer's products, showing the manufacturer's name.

ANS:

```
mysql> select avg(a.price),b.name from products a join manufacturers b on
a.manufacturer = b.code group by b.name;
+--------------+----------------+
| avg(a.price) | name           |
+--------------+----------------+
|          240 | Fujitsu        |
|         62.5 | Winchester     |
|          150 | Iomega         |
|          240 | Sony           |
|          130 | Creative Labs  |
|          168 | Hewlett-Packard |
+--------------+----------------+
```

-- 14. Select the names of manufacturer whose products have an average price larger than or equal to $150.

ANS:

```
mysql> select avg(price),manufacturers.name
    -> from products inner join manufacturers
    -> on products.manufacturer = manufacturers.code
    -> group by manufacturers.name
    -> having avg(price) >= 150;
+------------+-----------------+
| avg(price) | name            |
+------------+-----------------+
|        240 | Fujitsu         |
|        150 | Iomega          |
|        240 | Sony            |
|        168 | Hewlett-Packard |
+------------+-----------------+
```

-- 15. Select the name and price of the cheapest product.

ANS:

```
mysql> select name,price from products order by price ASC limit 1;
+-------------+-------+
| name        | price |
+-------------+-------+
| Floppy disk |     5 |
+-------------+-------+
```

-- 16. Select the name of each manufacturer along with the name and price of its most expensive product.

ANS:

```
mysql> SELECT A.Name, A.Price, F.Name
    -> FROM Products A INNER JOIN Manufacturers F
    -> ON A.Manufacturer = F.Code
    -> AND A.Price =(SELECT MAX(A.Price)FROM Products A WHERE A.Manufacturer = F.Code);
+---------------+-------+-----------------+
| Name          | Price | Name            |
+---------------+-------+-----------------+
| Hard drive    |   240 | Fujitsu         |
| Memory        |   120 | Winchester      |
| ZIP drive     |   150 | Iomega          |
| Monitor       |   240 | Sony            |
| DVD drive     |   180 | Creative Labs   |
| Laser Printer |   270 | Hewlett-Packard |
| DVD burner    |   180 | Creative Labs   |
+---------------+-------+-----------------+
```

-- 17. Select the name of each manufacturer which have an average price above $145 and contain at least 2 different products.

ANS:

```
    mysql> Select m.Name, Avg(p.price) as p_price, COUNT(p.Manufacturer) as m_count
        -> FROM Manufacturers m, Products p
        -> WHERE p.Manufacturer = m.code
        -> GROUP BY p.Manufacturer
        -> HAVING p_price >= 150 and m_count >= 2;
    +-----------------+---------+---------+
    | Name            | p_price | m_count |
    +-----------------+---------+---------+
    | Hewlett-Packard |     168 |       2 |
    +-----------------+---------+---------+

-- 18. Add a new product: Loudspeakers, $70, manufacturer 2.
    ANS:
    mysql> insert into products values(11,'Loudspeakers',70,2);

-- 19. Update the name of product 8 to "Laser Printer".
    ANS:
    mysql> update products set name = 'Laser Printer' where code = 8;

-- 20. Apply a 10% discount to all products.
    ANS:
    mysql> update products set price = price - (price*0.1);

-- 21. Apply a 10% discount to all products with a price larger than or equal to
$120.
    ANS:
    mysql> update products set price = price - (price * 0.1) where price >= 120;
```