1. Find the prime factorisation of the following numbers, using the factor tree method.

 (a) 44   (b) 54   (c) 64   (d) 72
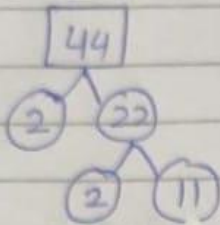
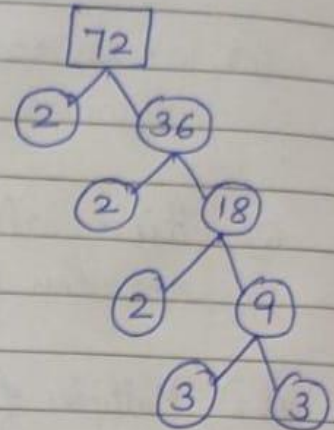 (e) 104   (f) 120   (g) 150   (h) 200
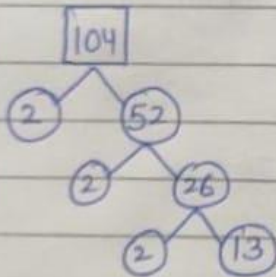
Solution 1:-

(a) 44

Prime Factorisation of
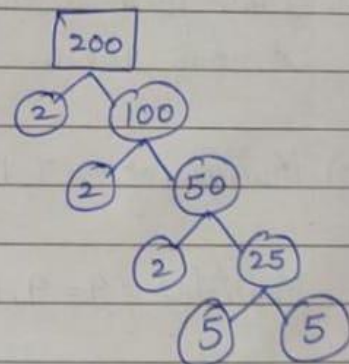$$44 = 2 \times 2 \times 11$$

(d) 72

Prime Factorisation of
$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

(e) 104

Prime Factorisation of
$$104 = 2 \times 2 \times 2 \times 13$$

(h) 200

Prime Factorisation of
$$200 = 2 \times 2 \times 2 \times 5 \times 5$$

2. **Write the prime factorisation of each of the following by division method.**

    (a) 56   (b) 70   (c) 108   (d) 81

    (e) 135   (f) 210   (g) 180   (h) 600

Solution 2:-

(a) 56

```
2 | 56
2 | 28
2 | 14
7 | 7
  | 1
```

$56 = 2 \times 2 \times 2 \times 7$

(c) 108

```
2 | 108
2 | 54
3 | 27
3 | 9
3 | 3
  | 1
```

$108 = 2 \times 2 \times 3 \times 3 \times 3$

(f) 210

```
2 | 210
5 | 105
3 | 21
7 | 7
  | 1
```

$210 = 2 \times 5 \times 3 \times 7$

(h) 600

```
2 | 600
2 | 300
2 | 150
3 | 75
5 | 25
5 | 5
  | 1
```

$600 = 2 \times 2 \times 2 \times 3 \times 5 \times 5$