

```
OPTIONS --->
    printTests true
    printTable true
    printTreeCard true
    srtTraversal true
    printDemo true
    validateTable true
    printOptions true
```

```
<--- OPTIONS
```

```
SUCC --->
```

```
1 2
1 3
1 4
2 4
2 5
3 4
3 6
4 5
4 6
4 7
5 7
6 7
```

```
<--- SUCC
```

```
WEIGHT --->
```

```
TRANS: 1 2 WEIGHT: 2
TRANS: 1 3 WEIGHT: 4
TRANS: 1 4 WEIGHT: 1
TRANS: 2 4 WEIGHT: 3
TRANS: 2 5 WEIGHT: 10
TRANS: 3 4 WEIGHT: 2
TRANS: 3 6 WEIGHT: 5
TRANS: 4 5 WEIGHT: 7
TRANS: 4 6 WEIGHT: 8
TRANS: 4 7 WEIGHT: 4
TRANS: 5 7 WEIGHT: 6
TRANS: 6 7 WEIGHT: 1
```

```
<--- WEIGHT
```

```
TRANS: 1 2 WEIGHT: 2
TRANS: 1 3 WEIGHT: 4
TRANS: 1 4 WEIGHT: 1
TRANS: 2 4 WEIGHT: 3
TRANS: 2 5 WEIGHT: 10
TRANS: 3 4 WEIGHT: 2
TRANS: 3 6 WEIGHT: 5
TRANS: 4 5 WEIGHT: 7
TRANS: 4 6 WEIGHT: 8
TRANS: 4 7 WEIGHT: 4
TRANS: 5 7 WEIGHT: 6
TRANS: 6 7 WEIGHT: 1
```

```
TREE SETS --->
```

```
    SET --->
```

```
        1
```

```
    <--- SET
```

```
    SET --->
```

```
        2
```

```

<--- SET
SET --->
3
<--- SET
SET --->
4
<--- SET
SET --->
5
<--- SET
SET --->
6
<--- SET
SET --->
7
<--- SET

```

<--- TREE SETS

```

EDGES --->
TRANS: 1 4 VAL: 1
TRANS: 2 4 VAL: 3
TRANS: 6 7 VAL: 1
TRANS: 1 3 VAL: 4
TRANS: 4 7 VAL: 4
TRANS: 1 2 VAL: 2
TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 4 6 VAL: 8
TRANS: 2 5 VAL: 10
TRANS: 5 7 VAL: 6
TRANS: 3 4 VAL: 2
<--- EDGES

```

```

VISITING TRANS: 1 4 W: 1
NODE: 1 SET ID: 1
NODE: 1 SET ID: 4
TREE SETS --->

```

```

SET --->
1
<--- SET
SET --->
2
<--- SET
SET --->
3
<--- SET
SET --->
4
<--- SET
SET --->
5

```

```

<--- SET
SET --->
    6
<--- SET
SET --->
    7
<--- SET

```

<--- TREE SETS

MST EDGE: 1 4

```

TREE SETS --->
    SET --->
        1
    <--- SET
    SET --->
        2
    <--- SET
    SET --->
        3
    <--- SET
    SET --->
        5
    <--- SET
    SET --->
        6
    <--- SET
    SET --->
        7
    <--- SET

```

<--- TREE SETS

TREE COST: 1

```

EDGES --->
TRANS: 6 7 VAL: 1
TRANS: 2 4 VAL: 3
TRANS: 3 4 VAL: 2
TRANS: 1 3 VAL: 4
TRANS: 4 7 VAL: 4
TRANS: 1 2 VAL: 2
TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 4 6 VAL: 8
TRANS: 2 5 VAL: 10
TRANS: 5 7 VAL: 6
<--- EDGES

```

```

VISITING TRANS: 6 7 W: 1
NODE: 6 SET ID: 6
NODE: 6 SET ID: 7
TREE SETS --->

```

```

SET --->
      1
      4
<--- SET

SET --->
      2
<--- SET

SET --->
      3
<--- SET

SET --->
      5
<--- SET

SET --->
      6
<--- SET

SET --->
      7
<--- SET

```

<--- TREE SETS

MST EDGE: 6 7

```

TREE SETS --->
  SET --->
        1
        4
    <--- SET

  SET --->
        2
    <--- SET

  SET --->
        3
    <--- SET

  SET --->
        5
    <--- SET

  SET --->
        6
        7
    <--- SET

```

<--- TREE SETS

TREE COST: 2

```

EDGES --->
TRANS: 3 4 VAL: 2
TRANS: 2 4 VAL: 3
TRANS: 1 2 VAL: 2
TRANS: 1 3 VAL: 4
TRANS: 4 7 VAL: 4

```

TRANS: 5 7 VAL: 6
TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 4 6 VAL: 8
TRANS: 2 5 VAL: 10
<--- EDGES

VISITING TRANS: 3 4 W: 2
NODE: 3 SET ID: 3
NODE: 3 SET ID: 1
TREE SETS --->

SET --->
1
4
<--- SET
SET --->
2
<--- SET
SET --->
3
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

MST EDGE: 3 4
TREE SETS --->

SET --->
1
3
4
<--- SET
SET --->
2
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

TREE COST: 4

EDGES --->

TRANS: 1 2 VAL: 2
TRANS: 2 4 VAL: 3
TRANS: 3 6 VAL: 5
TRANS: 1 3 VAL: 4
TRANS: 4 7 VAL: 4
TRANS: 5 7 VAL: 6
TRANS: 2 5 VAL: 10
TRANS: 4 5 VAL: 7
TRANS: 4 6 VAL: 8
<--- EDGES

VISITING TRANS: 1 2 W: 2
NODE: 1 SET ID: 1
NODE: 1 SET ID: 2
TREE SETS --->

SET --->
1
3
4
<--- SET
SET --->
2
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

MST EDGE: 1 2
TREE SETS --->
SET --->
1
2
3
4
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

TREE COST: 6

EDGES --->
TRANS: 2 4 VAL: 3
TRANS: 1 3 VAL: 4

TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 4 7 VAL: 4
TRANS: 5 7 VAL: 6
TRANS: 2 5 VAL: 10
TRANS: 4 6 VAL: 8
<--- EDGES

VISITING TRANS: 2 4 W: 3
NODE: 2 SET ID: 1
NODE: 2 SET ID: 1
TREE SETS --->

SET --->
1
2
3
4
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 2 4

EDGES --->
TRANS: 1 3 VAL: 4
TRANS: 4 7 VAL: 4
TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 4 6 VAL: 8
TRANS: 5 7 VAL: 6
TRANS: 2 5 VAL: 10
<--- EDGES

VISITING TRANS: 1 3 W: 4
NODE: 1 SET ID: 1
NODE: 1 SET ID: 1
TREE SETS --->

SET --->
1
2
3
4
<--- SET
SET --->
5
<--- SET
SET --->
6
7
<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 1 3

EDGES --->

TRANS: 4 7 VAL: 4
TRANS: 4 5 VAL: 7
TRANS: 3 6 VAL: 5
TRANS: 2 5 VAL: 10
TRANS: 4 6 VAL: 8
TRANS: 5 7 VAL: 6

<--- EDGES

VISITING TRANS: 4 7 W: 4

NODE: 4 SET ID: 1

NODE: 4 SET ID: 6

TREE SETS --->

SET --->

1
2
3
4

<--- SET

SET --->

5

<--- SET

SET --->

6
7

<--- SET

<--- TREE SETS

MST EDGE: 4 7

TREE SETS --->

SET --->

1
2
3
4
6
7

<--- SET

SET --->

5

<--- SET

<--- TREE SETS

TREE COST: 10

EDGES --->

TRANS: 3 6 VAL: 5
TRANS: 4 5 VAL: 7
TRANS: 5 7 VAL: 6
TRANS: 2 5 VAL: 10
TRANS: 4 6 VAL: 8

<--- EDGES

VISITING TRANS: 3 6 W: 5

NODE: 3 SET ID: 1

NODE: 3 SET ID: 1

TREE SETS --->

SET --->

1

2

3

4

6

7

<--- SET

SET --->

5

<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 3 6

EDGES --->

TRANS: 5 7 VAL: 6

TRANS: 4 5 VAL: 7

TRANS: 4 6 VAL: 8

TRANS: 2 5 VAL: 10

<--- EDGES

VISITING TRANS: 5 7 W: 6

NODE: 5 SET ID: 5

NODE: 5 SET ID: 1

TREE SETS --->

SET --->

1

2

3

4

6

7

<--- SET

SET --->

5

<--- SET

<--- TREE SETS

MST EDGE: 5 7

TREE SETS --->

SET --->

1

2

3

4

5

6

7

<--- SET

<--- TREE SETS

TREE COST: 16

EDGES --->

TRANS: 4 5 VAL: 7

TRANS: 2 5 VAL: 10

TRANS: 4 6 VAL: 8

<--- EDGES

VISITING TRANS: 4 5 W: 7

NODE: 4 SET ID: 1

NODE: 4 SET ID: 1

TREE SETS --->

SET --->

1

2

3

4

5

6

7

<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 4 5

EDGES --->

TRANS: 4 6 VAL: 8

TRANS: 2 5 VAL: 10

<--- EDGES

VISITING TRANS: 4 6 W: 8

NODE: 4 SET ID: 1

NODE: 4 SET ID: 1

TREE SETS --->

SET --->

1

2

3

4

5

6

7

<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 4 6

EDGES --->

TRANS: 2 5 VAL: 10

<--- EDGES

VISITING TRANS: 2 5 W: 10

NODE: 2 SET ID: 1

NODE: 2 SET ID: 1

TREE SETS --->

SET --->

1

2
3
4
5
6
7

<--- SET

<--- TREE SETS

SAME TREE COMP EDGE: 2 5

TREE SETS --->

SET --->

1

2
3
4
5
6
7

<--- SET

<--- TREE SETS

KRUSKAL MST --->

COST: 16

<--- KRUSKAL MST

MST --->

EDGE: 1 2 W: 2

EDGE: 1 4 W: 1

EDGE: 3 4 W: 2

EDGE: 4 7 W: 4

EDGE: 5 7 W: 6

EDGE: 6 7 W: 1

<--- MST

SET CARD --->

N_SETS: 1

SET: 1 CARD: 7

MIN_CARD: 7

MAX_CARD: 7

AVG_CARD: 7.0

<--- SET CARD

Normal termination!