Unit 26 Graphs

値(value i.e. number or amount)が増える(increase)，減る(decrease)，上がる(rise)，下がる(fall)が基本.

The load rises/climbs/goes up/increases.
There is a rise/an increase in load.

The load rises/climbs/goes up/increases sharply.
There is a sharp rise/increase in load.

The load falls / declines / dips (わずかに)/ drops / goes down / decreases.
There is a fall/decline/decrease/dip/drop in load.

The load falls/declines/dips/drops/goes down/decreases sharply.
There is a sharp fall/decline/decrease/dip/drop in load.

The load does not change/remain constant. / There is no change in load.

Task 1

a pie chart b bar chart (column chart)
c bar chart d graph

Task 2

1. Six p.m. to seven p.m..
2. Three a.m. to 4 a.m..
3. Seven a.m. to eight a.m. and ten p.m. to eleven p.m..
4. 90 percent.
5. The load rises sharply. / There is a sharp rise in load.
6. The load falls steadily. / There is a steady fall in load.
7. The road remains constant. / There is no change in load.

Task 3

1. The load increases steadily.
2. There is a steady fall in load.
3. There is a gradual decrease in load.
4. There is a sharp drop in load.
5. The load remains constant.
6. The load drops slightly.
7. The load does not change.
8. The load climbs and falls again.

Task 4

1. On Sunday, the load does not change between noon and 3 p.m. but on Saturday it falls gradually.
2. On weekdays, the load drops sharply between 10 p.m. and 11 p.m. but on Saturday it only falls slightly.
3. The peak load on Saturday is 6 p.m. to 7 p.m. but on Sunday it is 7 p.m. to 8 p.m..
4. The load remains constant on Sunday between noon and 1 p.m. and in the rest of the week at the same time.

Task 5

1. heated 2. compressed
3. lowering 4. raises
5. compresses 6. reduce
7. released 8. raises
9. reduces 10. increases
11. reduced 12. releases

Task 6

1. a From O to P the specimen extends in direct proportion to the load applied.
2. f Soon after P the material reaches its elastic limit, marked on the graph as point E.
3. c From Y there is a rapid increase in length for each increase in load.
4. b This rapid extension continues until point U, the maximum load, is reached.
5. e After U the specimen lengthens further but the load falls.
6. d At F the specimen finally fractures.

Task 7 and 8

From O to P the specimen (See Figure A) extends in direct proportion to the load applied. Soon after P the material reaches its elastic limit, marked on the graph as point E. Up to the elastic limit, the steel will regain its original length when the load is removed. After the elastic limit, the steel will not regain its original length. From Y, the yield point, there is a rapid increase in length for each increase in load. This rapid extension continues until point U, the maximum load, is reached. Up to U there is no change in the cross-section of the steel but after U the specimen undergoes 'waisting', as shown in Figure B. After U the specimen lengthens further but the load falls. At F the specimen finally fractures (Figure C).

Task 9

1. Ca 0.84%.
2. It falls steadily.
3. The more carbon, the harder the steel.
4. It decreases gradually.
5. It falls more slowly.

Task 10

1. Steel which contains more than 0.55% carbon.
2. More than 1.05%.
3. Mild steel is more ductile. Hard steel is harder and has greater tensile strength.
4. Low carbon steel.
5. Spring grades. s