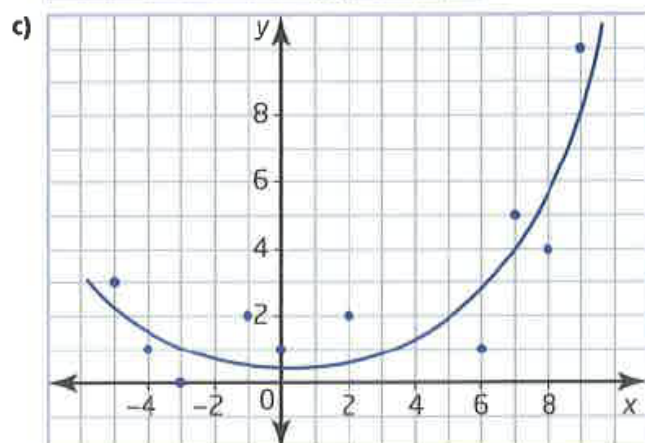## Answers:

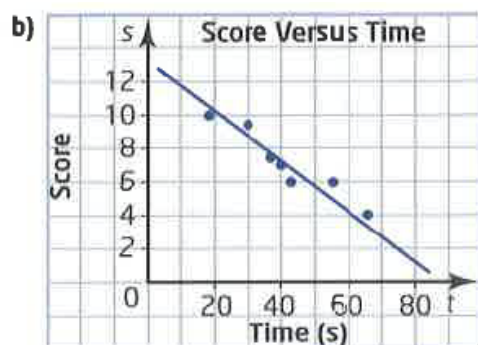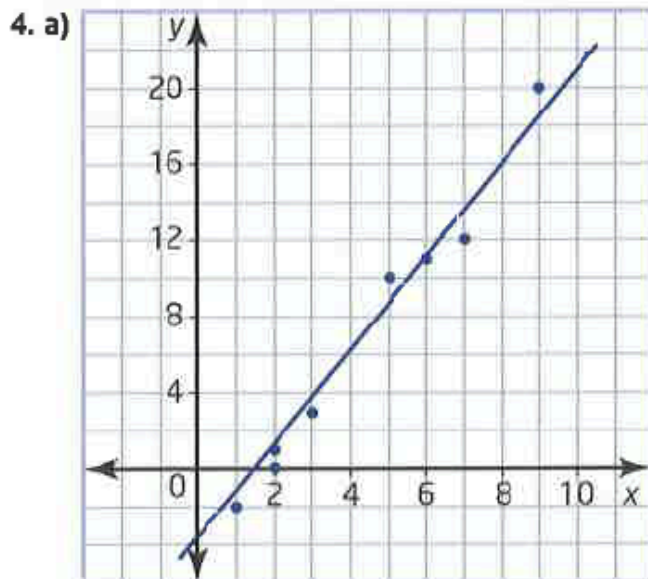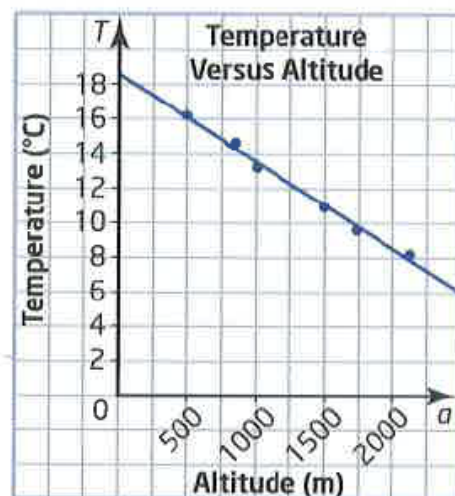**1. a)** Yes; the points lie close to a straight line.
   b) No; the points lie close to a curve.
2. a) Linear; the points lie on a straight line.
   b) Non-linear; the points lie on a curve.
3. a) Yes; points are reasonably close to a straight line.
   b) No; the points follow a curve.
   c) Yes; the points lie close to a straight line.
   d) No; there is no apparent pattern.
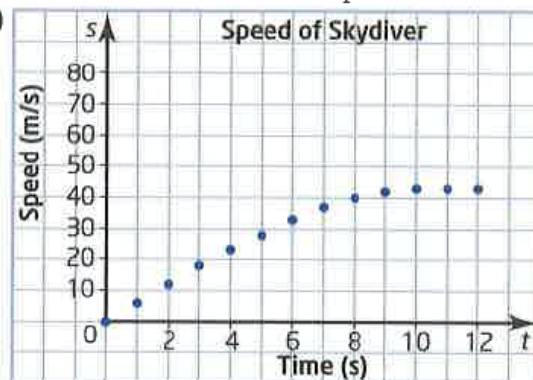   **e)** No; there are not enough points to find a good line of best fit.

4. a)

b)

c)

5. a), b)

The temperature decreases linearly as the altitude increases.

c) 15.5°C   **d)** 6.0°C

6. a), c)

b) about 70 m/s
d) Air resistance increases with speed, so the speed increases only until the air resistance offsets the acceleration due to gravity.
e) The relationship between the variables may change beyond the range of the data.

11. a) Linear; each time t increases by 1, d increases by 5.

b) Non-linear; h does not change by a constant amount each time t increases by 1.