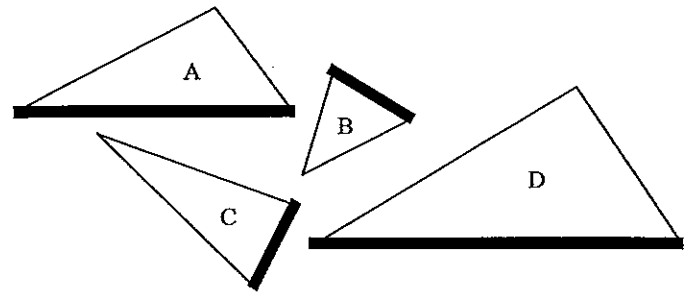
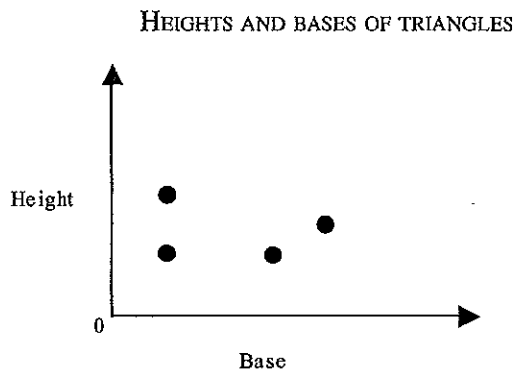


1. RELATIVE POSITIONS ON SCATTER GRAPHS

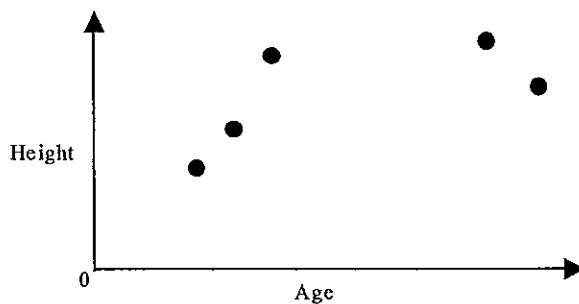
1. The points on the following graph each correspond to one of the four triangles. In each triangle the side to be taken as the base is darkened.



- Label each point on the graph to show which triangle it represents.
- Triangle E has the same base length as Triangle B but is less high than Triangle B. Mark and label a possible point for Triangle E on the graph.
- Triangle F has the same height as Triangle B but has a longer base. Mark and label a possible point for Triangle F on the graph.
- Can a point lie on either the vertical or the horizontal axis of this graph? Explain why or why not.
- The base of Triangle G is half that of Triangle A, but the two triangles have the same area. Mark and label a point for Triangle G on the graph.

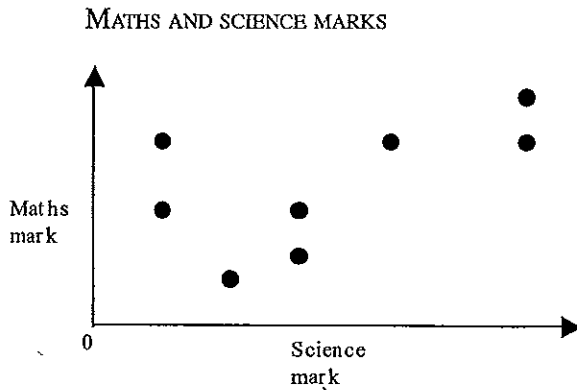
2. The McKeon family has five members. Mr McKeon is older than Mrs McKeon. Sue McKeon is in Year 4, and Bonnie McKeon is in Year 8. The eldest child, Tom, is still at school.

HEIGHTS AND AGES OF THE MCKEON FAMILY



- Who is taller, Mr or Mrs McKeon?
- What is the approximate ratio of Bonnie's height to Sue's height?
- What is the approximate ratio of the ages of the oldest family member and the youngest?
- What school year do you think Tom is in? Justify your answer.
- Cousin Kevin is twice as old as Bonnie and is half as tall as Mrs McKeon. Mark and label a point corresponding to Kevin on the graph.

3. The Maths and Science marks of eight students were recorded. On the graph below you may assume that each axis uses the same scale.

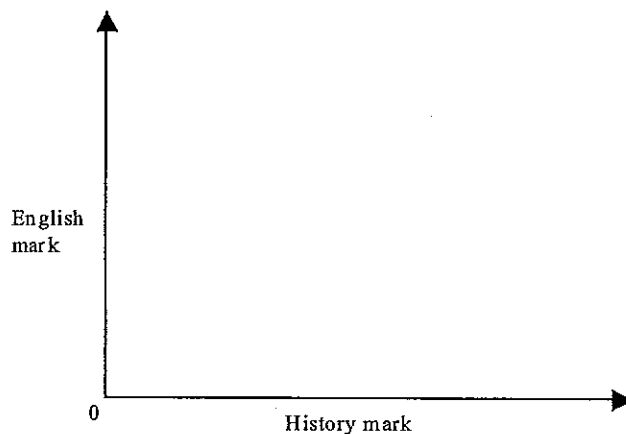


Label the points on the graph above using the following clues:

- Alice achieved the same Science mark as Bert and the same Maths mark as Colin.
- The highest Maths mark was achieved by either Edgar or Heather.
- Colin's ranking (among the eight students) was better in Maths than in Science.
- Gertrude performed worse in both Science and Maths than Donnie.
- Fred tied with Edgar in Science.

4. The English and History marks of five students were recorded. Plot and label points on the graph showing the following information.

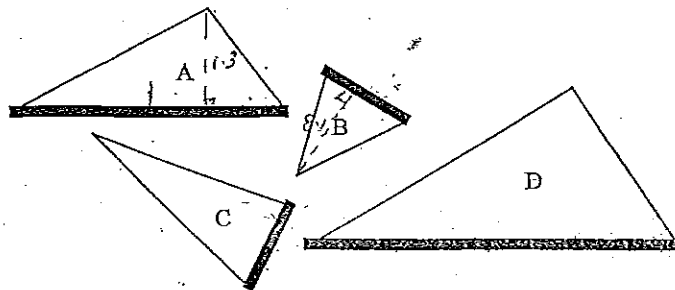
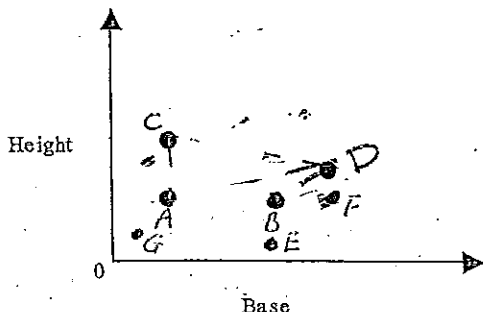
- Bert tied with Alice in English, and his History mark was double Alice's History mark.
- Colin tied with Bert in History and Colin's and Bert's English marks were in the ratio 2:3.
- Donnie's History mark was better than Alice's but worse than Colin's. Alice outperformed Donnie at English.
- Edgar came top in English but came last in History.



1. RELATIVE POSITIONS ON SCATTER GRAPHS

1. The points on the following graph each correspond to one of the four triangles. In each triangle the side to be taken as the base is darkened.

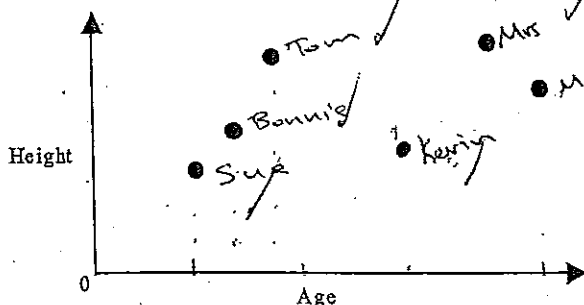
HEIGHTS AND BASES OF TRIANGLES



- Label each point on the graph to show which triangle it represents.
- Triangle E has the same base length as Triangle B but is less high than Triangle B. Mark and label a possible point for Triangle E on the graph.
- Triangle F has the same height as Triangle B but has a longer base. Mark and label a possible point for Triangle F on the graph.
- Can a point lie on either the vertical or the horizontal axis of this graph? Explain why or why not. *No, it would mean no base or height. Would not be a triangle.*
- The base of Triangle G is half that of Triangle A, but the two triangles have the same area. Mark and label a point for Triangle G on the graph.

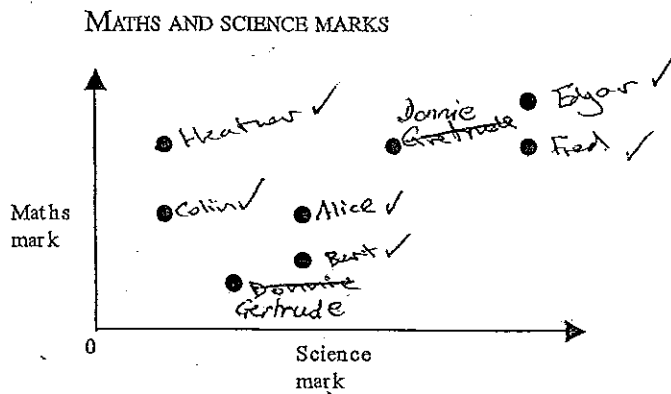
2. The McKeon family has five members. Mr McKeon is older than Mrs McKeon. Sue McKeon is in Year 4, and Bonnie McKeon is in Year 8. The eldest child, Tom, is still at school.

HEIGHTS AND AGES OF THE MCKEON FAMILY



- forget to answer this?*
- Who is taller, Mr or Mrs McKeon?
 - What is the approximate ratio of Bonnie's height to Sue's height?
 - What is the approximate ratio of the ages of the oldest family member and the youngest?
 - What school year do you think Tom is in? Justify your answer.
 - Cousin Kevin is twice as old as Bonnie and is half as tall as Mrs McKeon. Mark and label a point corresponding to Kevin on the graph.

3. The Maths and Science marks of eight students were recorded. On the graph below you may assume that each axis uses the same scale.



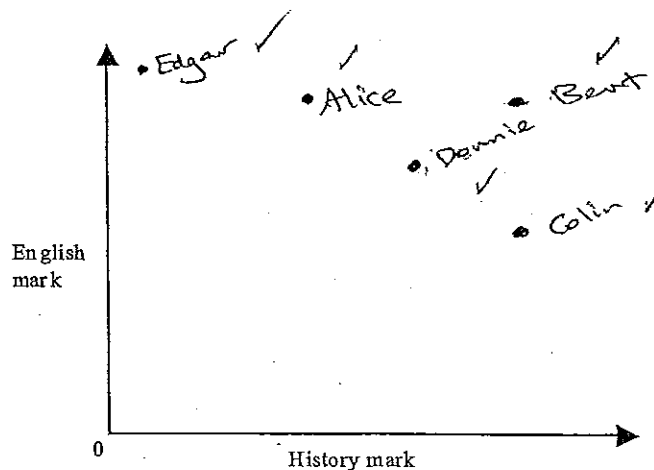
Alice = Bert (science)
Alice = Colin (maths)

Label the points on the graph above using the following clues:

- Alice achieved the same Science mark as Bert and the same Maths mark as Colin.
- The highest Maths mark was achieved by either Edgar or Heather.
- Colin's ranking (among the eight students) was better in Maths than in Science.
- Gertrude performed worse in both Science and Maths than Donnie.
- Fred tied with Edgar in Science.

4. The English and History marks of five students were recorded. Plot and label points on the graph showing the following information.

- ✓ Bert tied with Alice in English, and his History mark was double Alice's History mark.
- ✓ Colin tied with Bert in History and Colin's and Bert's English marks were in the ratio 2:3.
- ✓ Donnie's History mark was better than Alice's but worse than Colin's. Alice outperformed Donnie at English.
- ✓ Edgar came top in English but came last in History.



V. Good!

Relative Positions on Scatter Graphs

②

Mr McKeon

Mrs McKeon

Tom

Bonnie

Sue

- Mrs McKeon is taller ✓
- The approximate ratio is 4:3 ✓
- The approximate ratio is 4:1 ✓
- Tom is probably in year 12, because of the ratio between their ages ✓
-

④ Bert = Alice in English.

Bert = 2x Alice in History.

Colin = Bert in History.

Colin + Bert = ratio 2:3 in English.

Colin < Donnie > Alice in history.

Alice > Donnie in English.

92

93

94

95