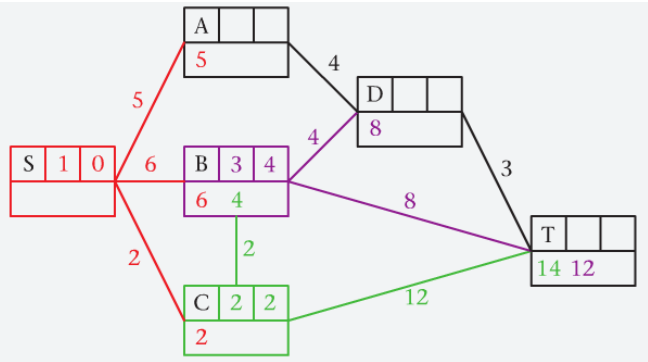


# Decision Revision Quiz

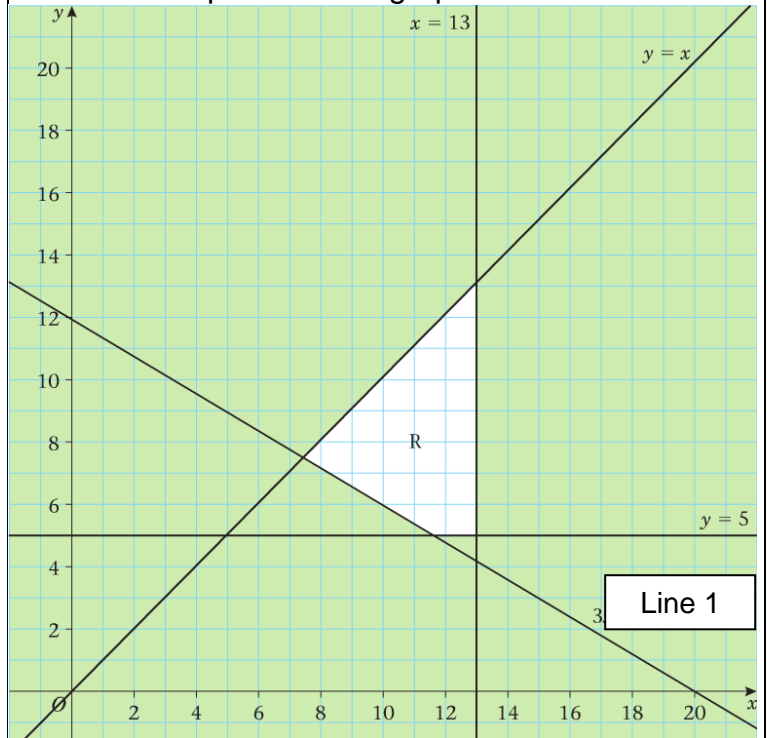
Answer all questions on a separate sheet recording your answers on both sides. Half will be handed in to check the correct answers.

## Section 1: Picture round

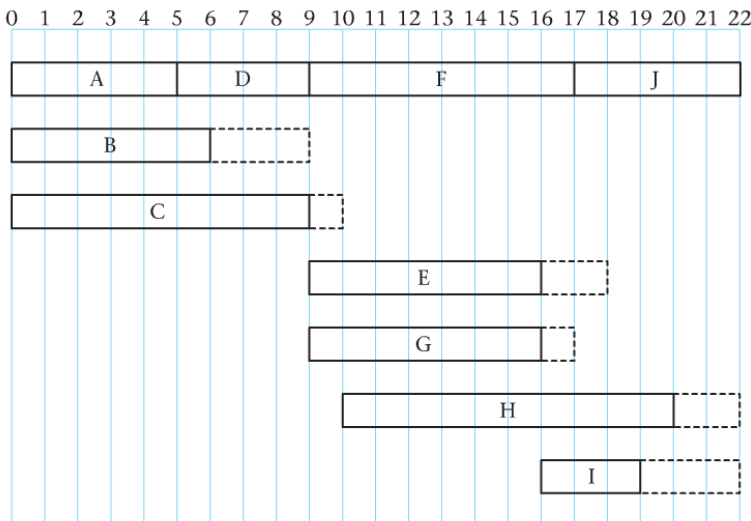
Q1. What do the bottom boxes in the diagram below show?



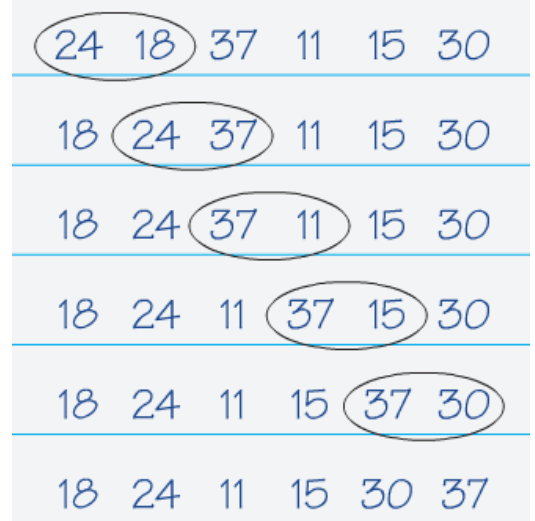
Q2. Which topic does the graph below come from?



Q3. What does the top line on the gantt chart represent?  
Q4. What do the dashed lines represent.



Q5. Which algorithm is being used in the following picture?



## Section 2: Multiple choice

Q1. When would you use a bin-packing algorithm?

- a. To sort a group into alphabetical order
- b. To work out how many pieces of wood you needed for a building project
- c. To find the cheapest way of getting from Sheffield to Edinburgh by bus
- d. To allocate jobs to five people

Q2. Which of the following is true of Dijkstra's algorithm?

- a. Points are labelled in order from left to right
- b. Points can be labelled in any order
- c. Points are labelled in order according to their distance from the start
- d. Points are labelled in order of the weight of arcs leading to them

Q3. How would you begin to solve a route inspection problem?

- a. By finding a Hamiltonian cycle.
- b. By following a labelling procedure
- c. By finding earliest and latest times
- d. By identifying the odd nodes and finding shortest pairs

Q4. In critical path analysis the lower bound for the number of workers needed may be found by

- a. Dividing number of tasks by minimum time
- b. Multiplying number of tasks by minimum time
- c. Dividing total time by minimum time
- d. Multiplying total time by minimum time

Q5. To find the maximum profit on a graph

- a. Look for the last point in the region parallel to a profit line
- b. Look for the first point in the region parallel to a profit line
- c. Look for the last point in the region perpendicular to a profit line
- d. Look for the first point in the region perpendicular to a profit line

## Section 3: Definitions

**The last letter of each answer is the first letter of the next answer.**

Q1. Graphs that show the same information but are drawn differently are known as...

Q2. A graph in which every vertex is directly connect by an edge to each of the other vertices.

Q3. In an activity network the top box represents ...

Q4. The final node in an activity network is known as the ..... node

Q5. A method of finding the minimum spanning tree that cannot be applied to a matrix

## Section 4: Quick calculations

Q1. Find an alternating path between D and 1 in picture 1.

Q2. Which activities must be taking place at 12.30 on the chart in picture 3?

Q3. What.

Q4, 10 lengths of fabric need to be cut from rolls of length 60m. Calculate the lower bound for the number of rolls needed?

Q5. Longley haulage has to transport 1600 packages. Large vans (x) can take 200 packages each, small vans can take 80 each. Write down an inequality, in terms of x and y, to model this constraint.

Team name

**Section 1: Picture round**

- 1
- 2
- 3
- 4
- 5

**Section 2: Multiple choice**

- 1
- 2
- 3
- 4
- 5

**Section 3: Definitions**

- 1
- 2
- 3
- 4
- 5

**Section 4: Quick calculations**

- 1
- 2
- 3
- 4
- 5

Team name

**Section 1: Picture round**

- 1
- 2
- 3
- 4
- 5

**Section 2: Multiple choice**

- 1
- 2
- 3
- 4
- 5

**Section 3: Definitions**

- 1
- 2
- 3
- 4
- 5

**Section 4: Quick calculations**

- 1
- 2
- 3
- 4
- 5

