Дунаев Виктор , 3 курс , 6 группа , Вариант 23

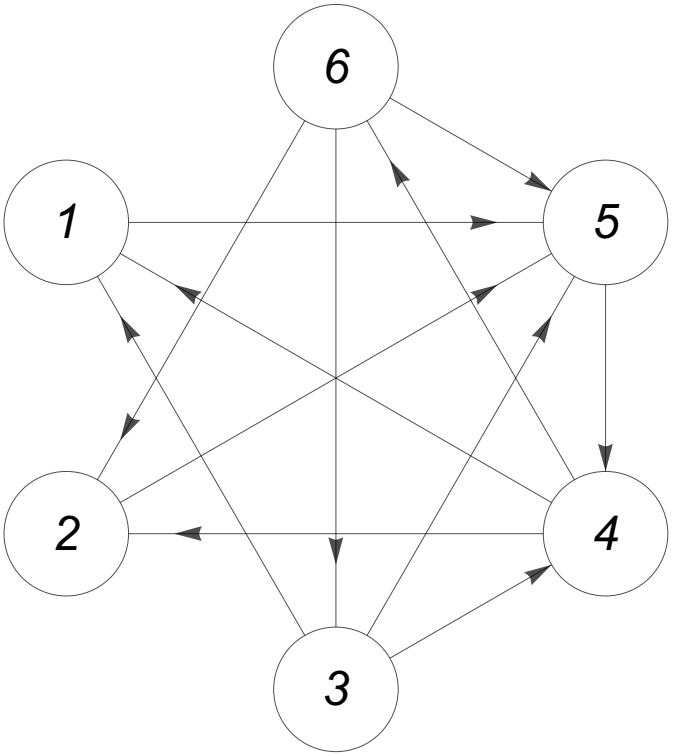
Task 1

```
vertex = {1, 2, 3, 4, 5, 6};

edges =
  {1 ↔ 5, 2 ↔ 5, 3 ↔ 1, 3 ↔ 4, 3 ↔ 5, 4 ↔ 1, 4 ↔ 2, 4 ↔ 6, 5 ↔ 4, 6 ↔ 2, 6 ↔ 3, 6 ↔ 5};
```

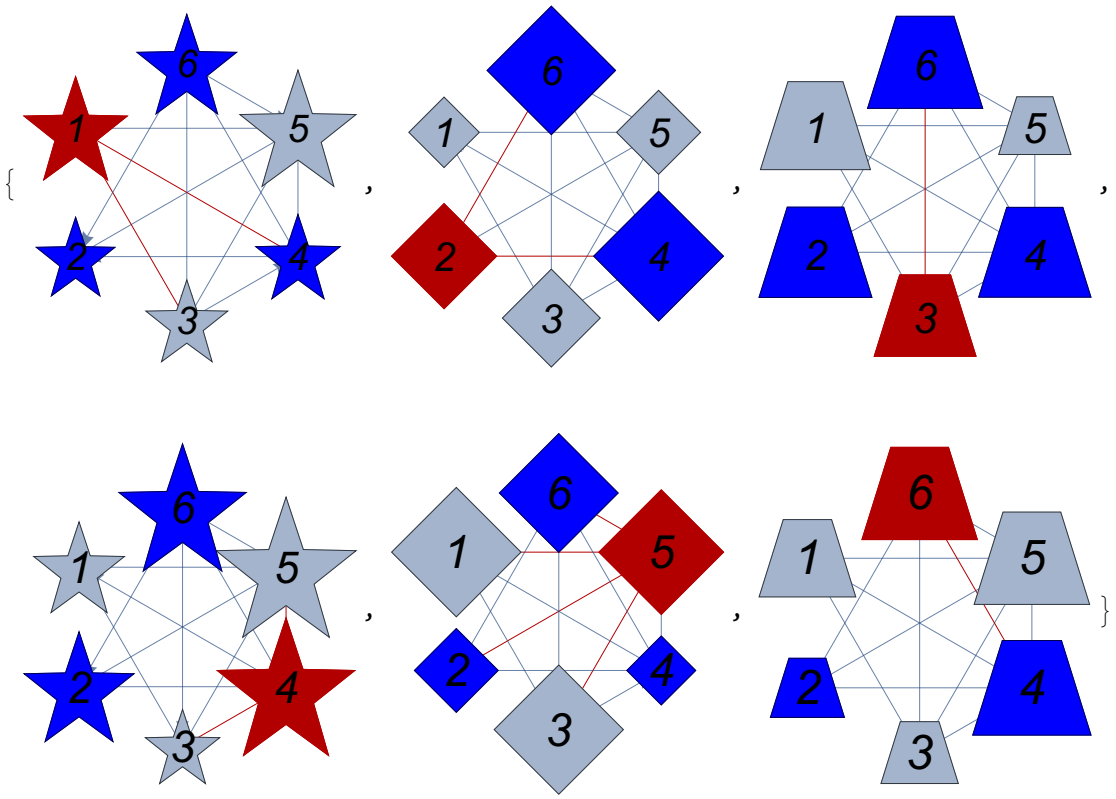
Task 2

```
MYgraffon = Graph[vertex, edges, VertexSize → Large,
  VertexStyle → White, VertexLabels → Placed["Name", Center],
  VertexLabelStyle → Directive[Black, Italic, 25],
  GraphLayout → {"CircularEmbedding"}, EdgeShapeFunction → "Arrow", EdgeStyle → Black]
```



Task 3

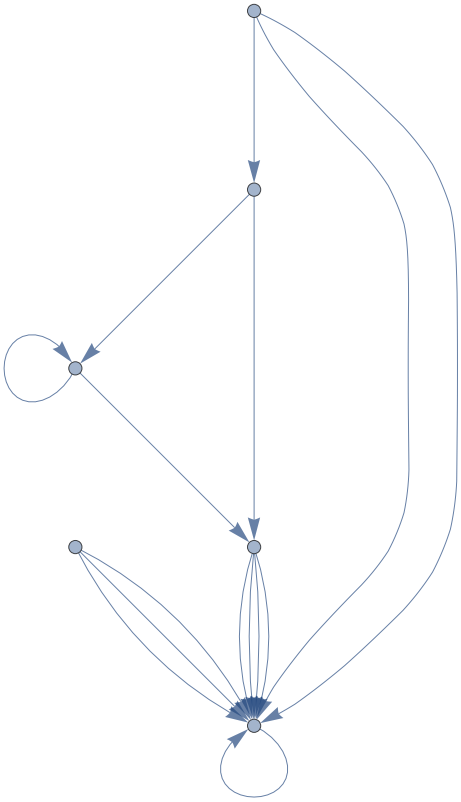
```
Table[Graph[vertex, edges, VertexSize → Table[i → RandomReal[{0.5, 1}], {i, 1, 6}],
  VertexShapeFunction → {"UpTrapezoid", "Star", "Diamond"}[[Mod[k, 3] + 1]],
  VertexStyle → {_?EvenQ → Blue}, VertexLabels → Placed["Name", Center],
  VertexLabelStyle → Directive[Black, Italic, 19 + k],
  GraphHighlight → {k, _ ↔ k}, GraphLayout → {"CircularEmbedding"}], {k, 1, 6}]
```



Task 4

```
getMyGraph[vertexNum_, edgesNum_] := (
  ClearAll[edges, vertex];
  vertex = Table[i, {i, 1, vertexNum}];
  edges = Table[i ↔ # & /@ RandomChoice[vertex, edgesNum], {i, 1, vertexNum}];
  edges = RandomChoice[Flatten[edges], edgesNum];
  Graph[vertex, edges]
 )
```

```
getMyGraph[6, 15]
```



Task 5

Sad Smile : (