1- How many Namespaces exist on the system?

```
Editor   Tab 1   +
Initialising Kubernetes... done

controlplane:~$ k get namespaces
NAME                    STATUS   AGE
default                 Active   30d
kube-node-lease         Active   30d
kube-public             Active   30d
kube-system             Active   30d
local-path-storage      Active   30d
controlplane:~$
```

2- How many pods exist in the kube-system namespace?

```
controlplane:~$ k get pods --namespace=kube-system
NAME                                        READY   STATUS    RESTARTS      AGE
calico-kube-controllers-fdf5f5495-dgc76     1/1     Running   2 (50m ago)   33d
canal-9hc7x                                 2/2     Running   2 (50m ago)   33d
canal-b5cnm                                 2/2     Running   2 (50m ago)   33d
coredns-7695687499-2vdd4                    1/1     Running   1 (50m ago)   33d
coredns-7695687499-ltw2v                    1/1     Running   1 (50m ago)   33d
etcd-controlplane                           1/1     Running   3 (50m ago)   33d
kube-apiserver-controlplane                 1/1     Running   2 (50m ago)   33d
kube-controller-manager-controlplane        1/1     Running   2 (50m ago)   33d
kube-proxy-f7jnk                            1/1     Running   2 (50m ago)   33d
kube-proxy-fbkjh                            1/1     Running   1 (50m ago)   33d
kube-scheduler-controlplane                 1/1     Running   2 (50m ago)   33d
controlplane:~$ k get pods --namespace=kube-system --no-headers | wc -l
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```

3- Create a deployment with

Name: beta

Image: redis

Replicas: 2

Namespace: finance

Resources Requests:

CPU: .5 vcpu
Mem: 1G

Resources Limits:

CPU: 1 vcpu
Mem: 2G

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: beta
  labels:
    app: redis
  namespace: finance
spec:
  replicas: 2
  selector:
    matchLabels:
      task: task2
  template:
    metadata:
      labels:
        task: task2
    spec:
      containers:
      - name: rediscon
        image: redis
        resources:
          requests:
            cpu: 0.5
            memory: "1Gi"
          limits:
            cpu: 1
            memory: "2Gi"
```

```
controlplane:~$ k get pods
NAME                   READY   STATUS    RESTARTS   AGE
beta-574dc56b6-cmml7   1/1     Running   0          2m30s
beta-574dc56b6-vl228   1/1     Running   0          2m30s
controlplane:~$
```

4- How many Nodes exist on the system?

```
Editor    Tab 1    +
controlplane:~$ k get nodes
NAME             STATUS    ROLES           AGE    VERSION
controlplane     Ready     control-plane   30d    v1.32.1
node01           Ready     <none>          30d    v1.32.1
controlplane:~$
```

5- Do you see any taints on master?

No

```
controlplane:~$ k describe node controlplane | grep Taints
Taints:              <none>
controlplane:~$ k describe node node01 | grep Taints
Taints:              <none>
controlplane:~$
```

6- Apply a label color=blue to the master node

```
controlplane:~$ k label nodes controlplane color=blue
node/controlplane labeled
controlplane:~$ k describe nodes controlplane
Name:              controlplane
Roles:             control-plane
Labels:            beta.kubernetes.io/arch=amd64
                   beta.kubernetes.io/os=linux
                   color=blue
```