

Hydrogen (12 Points)

Up Quark

Electric Charge: $+2/3$
Spin: $1/2$
Mass: 2.3 MeV
Half Life: Stable

Colour Charge: Yes
Baryon Number: $1/3$
1st generation (1 point)



Up Quark

Electric Charge: $+2/3$
Spin: $1/2$
Mass: 2.3 MeV
Half Life: Stable

Colour Charge: Yes
Baryon Number: $1/3$
1st generation (1 point)



Down Quark

Electric Charge: $-1/3$
Spin: $1/2$
Mass: 4.8 MeV
Half Life: Stable

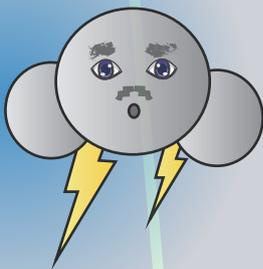
Colour Charge: Yes
Baryon Number: $1/3$
1st generation (1 point)



Electron

Electric Charge: -1
Spin: $1/2$
Mass: 0.511 MeV
Half Life: Stable

Colour Charge: No
Lepton Number (e): 1
1st generation (1 point)

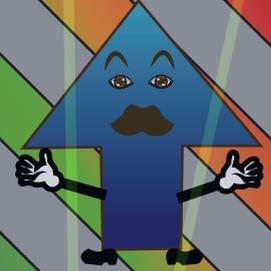


Anti-Hydrogen (50 Points)

Anti-Up Quark

Electric Charge: $-2/3$
Spin: $1/2$
Mass: 2.3 MeV
Half Life: Stable

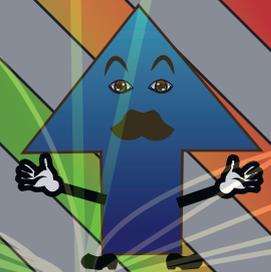
Colour Charge: Yes
Baryon Number: $-1/3$
1st generation (1 point)



Anti-Up Quark

Electric Charge: $-2/3$
Spin: $1/2$
Mass: 2.3 MeV
Half Life: Stable

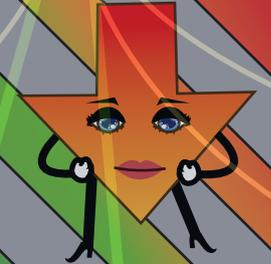
Colour Charge: Yes
Baryon Number: $-1/3$
1st generation (1 point)



Anti-Down Quark

Electric Charge: $+1/3$
Spin: $1/2$
Mass: 4.8 MeV
Half Life: Stable

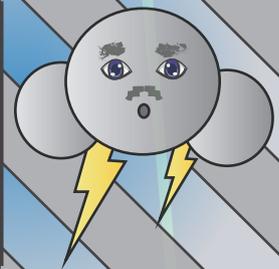
Colour Charge: Yes
Baryon Number: $-1/3$
1st generation (1 point)



Positron (Anti-Electron)

Electric Charge: $+1$
Spin: $1/2$
Mass: 0.511 MeV
Half Life: Stable

Colour Charge: No
Lepton Number (e): -1
1st generation (1 point)



Hydrogen consists of a proton and an electron. Hydrogen was discovered in 1766 by Henry Cavendish.

Anti-hydrogen consists of an anti-proton and a positron. It was first produced in 1990s.