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## Hubble Constant

### Q1.

What is the Hubble Constant and what does it tell us?

### Q2.

What is the current estimate for the Hubble Constant and what are its units?

### Q3.

How can we use the Hubble Constant to estimate the age of the Universe?

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**Q4.**

How can we measure the distance and speed of a far galaxy?

**Q5 (sus).**

What are some sources of uncertainty or error in measuring the Hubble Constant?

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**Q6 (sus).**

A galaxy is observed to have a redshift of 0.01. What is its speed away from us and its distance from us? Use  $H_0 = 2.2 \times 10^{-18}$  per second.

**Q7.**

If a galaxy is  $2.0 \times 10^{25}$  m away from us and has a speed of  $4.4 \times 10^6$  m/s, what is the value of  $H_0$ ?

**Q8.**

If a galaxy has a speed of  $3.3 \times 10^6$  m/s and the value of  $H_0$  is  $1.1 \times 10^{-18}$  per second, what is its distance from us?

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**Q9.**

If a galaxy is  $1.8 \times 10^{25}$  m away from us and the value of  $H_0$  is  $2.7 \times 10^{-18}$  per second, what is its speed away from us?