

R_* & f_p	$n_c = n_p \times f_s$	f_l	f_i	f_c & L	Misc
<u>10 Point</u>	<u>10 Point</u>	<u>10 Point</u>	<u>10 Point</u>	<u>10 Point</u>	<u>10 Point</u>
<u>20 Points</u>	<u>20 Points</u>	<u>20 Points</u>	<u>20 Points</u>	<u>20 Points</u>	<u>20 Points</u>
<u>30 Points</u>	<u>30 Points</u>	<u>30 Points</u>	<u>30 Points</u>	<u>30 Points</u>	<u>30 Points</u>
<u>40 Points</u>	<u>40 Points</u>	<u>40 Points</u>	<u>40 Points</u>	<u>40 Points</u>	<u>40 Points</u>
<u>50 Points</u>	<u>50 Points</u>	<u>50 Points</u>	<u>50 Points</u>	<u>50 Points</u>	<u>50 Points</u>

This Drake term is probably the most well known value.

What is the star formation rate (R_*)?

This early structure of the Solar System explains why the Solar System bodies all orbit the same way in the same plane.

**What is a
circumstellar
disk?**

**4.2 light years is the
distance away.**

**How far away is
the nearest
star?**

**This explains why a star
does not collapse or
explode.**

**What is
Hydrostatic
equilibrium?**

**This was the
surprising result
from the first
exoplanets detected.**

**What is Jupiter-
like planets
found close to
their star?**

**The proto-Earth
collided with a
Mars-sized
object and
created this.**

**What is the
Moon?**

**No atmosphere, no
oceans, hot, and no life
well describes the Earth
at this time.**

**What is the very
early Earth?**

**Although very
common today, this
element was not in
the first permanent
atmosphere of
Earth.**

What is oxygen?

**This is the region
around a star where
water can be in its
liquid form.**

**What is the
habitable zone?**

**We exclude massive
stars in our Drake
term f_s for this main
reason.**

**What is the
lifetime of a
massive star?**

**This is the monomer
of proteins.**

**What are amino
acids?**

**This legitimized the
scientific search for
the origins of life.**

What is the Miller-Urey experiment?

This is what is meant in class by left-handed life.

What is life that uses left-handed amino acids?

This is the most likely transition to life model.

What is the RNA world?

All of the elements heavier than iron are forged in this way?

What is a supernova explosion?

The ability to model the world, including yourself.

**What is the
definition of
intelligence?**

**This lifeform
oxygenated the
Earth's atmosphere 2
billion years ago.**

**What is
cyanobacteria?**

**This is the most
successful primate.**

**What are
humans?**

**Evolutionary, this
is why mutant sex
is good.**

**What is the
combination of
“good” or positive
mutations?**

**This is necessary to
estimate the age of
fossils over 60,000 yrs
old.**

What is radioactive dating of the volcanic rocks above and below the fossil?

Extra-somatic storage.

What is information stored outside of the body?

Anatomically modern humans for the last 100,000 yrs, this changed our cultural evolution 10,000 yrs ago.

**What is
agriculture?**

**Although energy will
always be important,
this structure could
capture most of the
energy of the Sun .**

**What is a Dyson
Sphere?**

**This will cause the Earth
to get hot (probably boil
the oceans) in only 2
billion years.**

**What is the
evolution of the
Sun?**

**These are the 3
Copernican
Revolutions.**

**What are: We are not the
center of the Solar
System, we are not the
center of the Galaxy,
and we are not the
center of the Universe?**

**This frequency band
contains arguably the
best frequencies to
search for
extraterrestrial
intelligence.**

What is 1-10 GHz?

This message was only sent once (3 mins long) and was hard to decipher.

What is the Arecibo Message?

These telescopes are the most sensitive, but have the smallest field of view.

**What are big radio
telescopes?**

**Gwen, the twin of Ben,
travels near the speed
of light for a year, then
returns, which twin is
oldest now?**

Who is Ben?

**This document is the
only serious
scientific study of
UFOs.**

**What is the Condon
Report?**

Final Jeopardy

Make your wager

**If $N > 8000$ and we want to
find the distance to the
nearest ET, then we can
assume that the Galactic
search volume is this .**

What is a sphere?