

Name: _____

Multiplying Germs (They're Everywhere!)

Remember the fictional germ we just talked about? One germ doubles every hour at room temperature (70°F/21°C). It doubles every 6 hours in the refrigerator (40°F/4°C). It doubles every 4 hours when heated in the oven (120°F/49°C). We have already calculated how many germs there would be in 24 hours. Fill in the following table to find out how many germs there will be at the times given.

Location	1 hour	2 hours	4 hours	6 hours	8 hours	12 hours	2 days
Room Temperature (70°F/21°C)							
Refrigerator (40°F/4°C)							
Oven (120°F/49°C)							

Which location has the most germs for the times given?

How do you think temperature affects how fast germs grow?

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Location	1 hour	2 hours	4 hours	6 hours	8 hours	12 hours	2 days
Room Temperature (70°F/21°C)	2	4	16	64	256	4096	
Refrigerator (40°F/4°C)	1	1	1	2	2	4	256
Oven (120°F/49°C)	1	1	2	2	8	16	8,192

Which location has the most germs for the times given?

Room temperature

How do you think temperature affects how fast germs grow?

Germs do not multiply as quickly at lower and higher temperatures. They grow fastest at room temperature.