Heating in the microwave

This task is about interpreting data from tables.

Sarai wanted to find out if there were differences in the temperature of a cup of water when it was heated in the microwave at different power settings. She tested each power setting by heating 100 mLs of water for 30 seconds. Here are her results.

Power setting on microwave	Temperature of 100 mL water		
	Before heating	After heating	Temperature change
High (100%)	11°C	41°C	30°C
Reheat (70%)	11°C	32°C	21°C
Medium (40%)	11°C	25°C	14°C
Low (20%)	11°C	20°C	9°C

a) What power setting would you use if you wanted to heat your hot chocolate drink the quickest?

O High   O Reheat   O Medium   O Low

b) If you put 100 mLs of water at 11°C in the microwave at a new power setting of 50%,

what would you expect the temperature of the water to be after 30 seconds? [ ] °C

c) What are **two** parts of this experiment that Sarai kept the same?

1. [   ]

2. [   ]

d) Karaka tried heating different amounts of water in the microwave for 30 seconds.
Here are his results.

Amount of water (mL)	Temperature increase
100	30°C
150	21°C
200	13°C
250	11°C
300	7°C

Write a rule to explain the pattern these results show.

[   ]