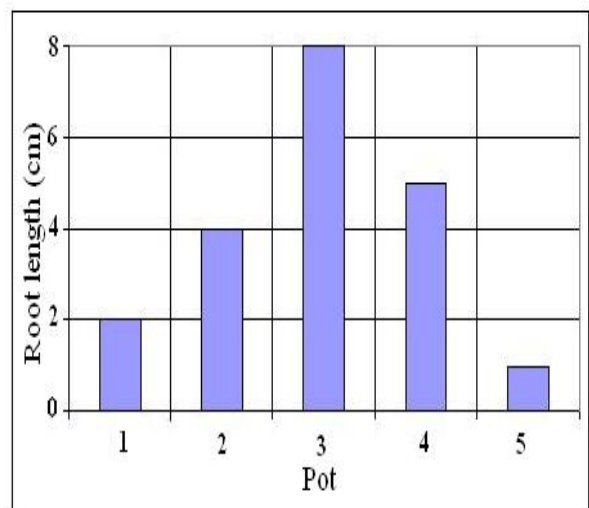
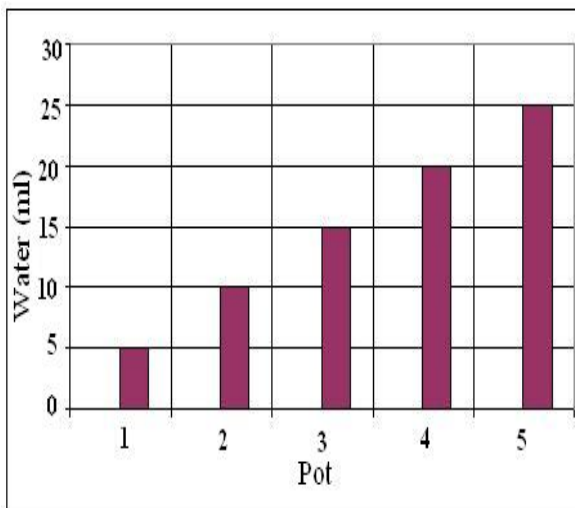


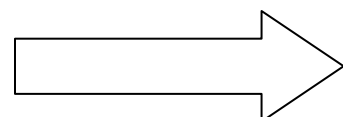
# Water and Air Temperature

## PreTest

- To control variables means to
  - measure properly.
  - repeat the experiment.
  - change one thing at a time.
  - test things out yourself.
- Alice planted radish seed in five different pots. She treated all pots the same, except she used different amounts of water. According to the data in the graphs below, what is the optimum amount of water that a radish seed needs each day in order to grow the longest roots?



- 5 milliliters (ml)
- 15 milliliters (ml)
- 20 milliliters (ml)
- 25 milliliters (ml)



3. Mary wanted to find out what kind of cloth dries the fastest after it gets wet. She got a cotton scarf, a wool mitten, and a nylon shirt. She poured some water on all three and then put them out to dry. The next day she felt the three pieces of cloth and they felt dry. She concluded that all kinds of cloth dry at the same rate.

Leslie thought Mary's experiment didn't really prove that all kinds of cloth dry at the same rate. Describe two ways Mary could improve her experiment.

1.

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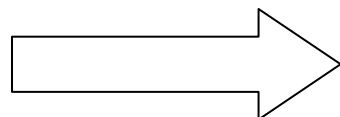
2.

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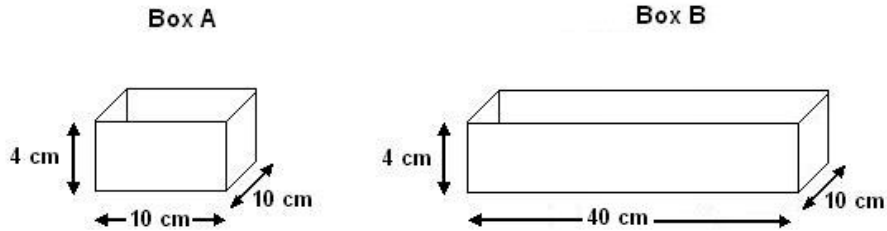
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4. Cory and Rachel set up the two solar water heater boxes shown below. Each box is 4 cm high and 10 cm wide. Only the lengths are different. Box A is 10 cm long and Box B is 40 cm long.



They filled each with 250 ml of water, and put a clear plastic lid on each one. Then they set the boxes out in the sunshine. Here are the data that they collected:

Elapsed time	Temperature change			
	5 minutes	10 minutes	15 minutes	20 minutes
Box A (10 cm)	3°C	6°C	9°C	10°C
Box B (40 cm)	9°C	14°C	19°C	22°C

- a. Use the graph paper on the next page to graph the data. Be sure to label all parts of the graph.
- b. Predict the temperature change after 20 minutes for a box that is 30 cm long. Tell how you made this prediction.

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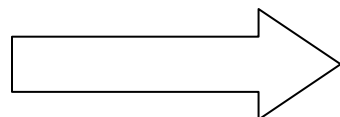
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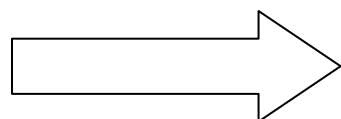
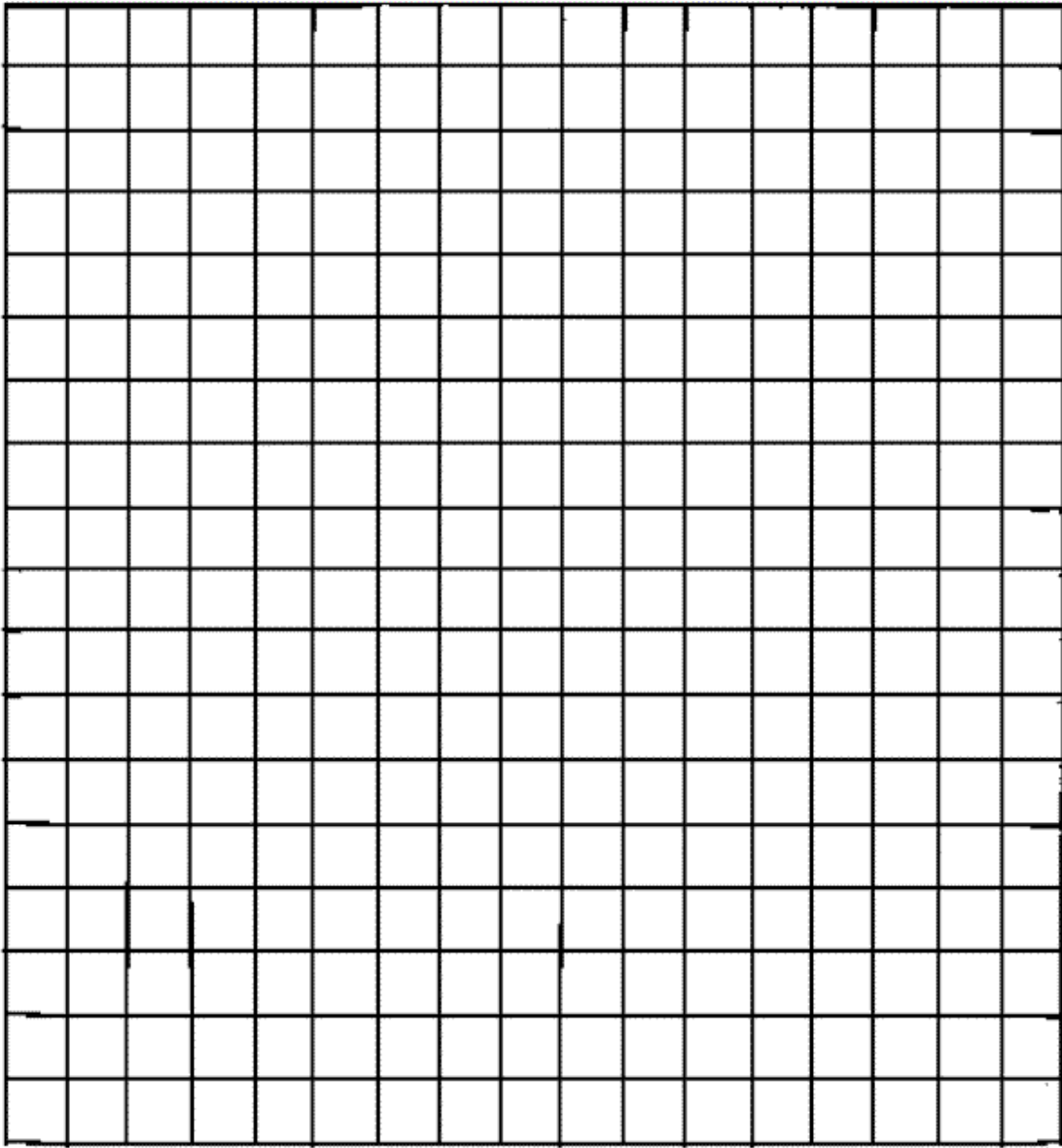


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Water and Air Temperature

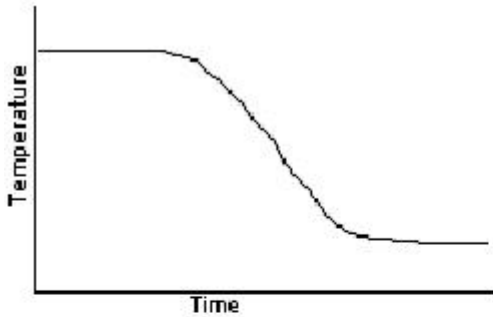
Draw the graph for question 4a here.



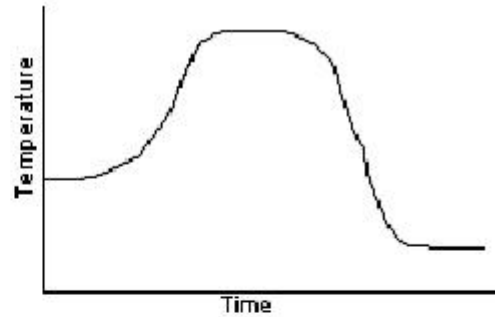
Water and Air Temperature

5. Jason used a temperature sensor to measure the temperature of different things. This is what he measured:
- a. the air in the classroom
  - b. a cup of cold water
  - c. his body temperature under his chin

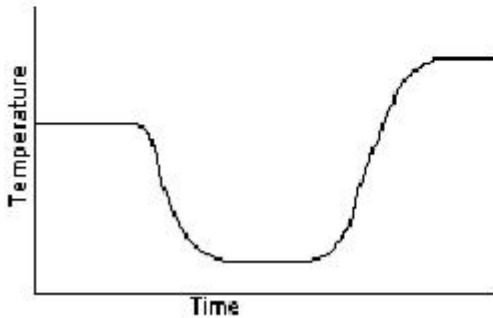
Which graph shows the data collected from the temperature sensor?



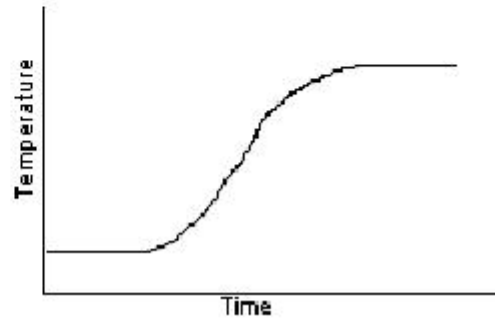
(A)



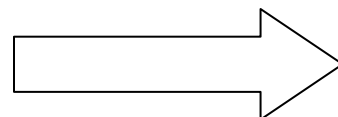
(B)



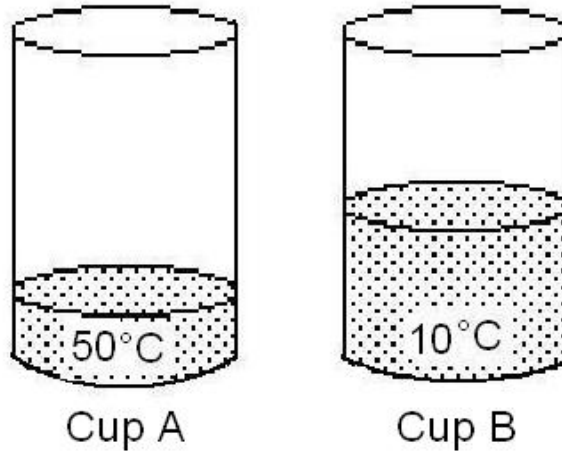
(C)



(D)



Water and Air Temperature



6. Bonnee puts one cup of water into Cup A. The water is  $50^{\circ}\text{C}$ . She puts two cups of water into Cup B. The water is  $10^{\circ}\text{C}$ . Then she mixes both cups together. What do you think the final temperature of the water will be?

- A. between  $10^{\circ}\text{C}$  and  $30^{\circ}\text{C}$
- B.  $30^{\circ}\text{C}$
- C. between  $30^{\circ}\text{C}$  and  $50^{\circ}\text{C}$
- D.  $60^{\circ}\text{C}$

