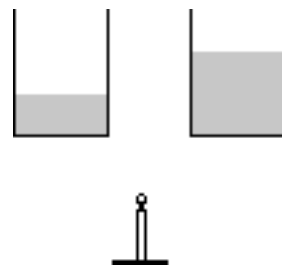Mass, Temperature and Heat
DCI

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1.   Two containers of water are at 20 ˚C initially. One contains 50 mLs and the other 100 mLs. They are each heated with the same source of heat for the same amount of time. If the final temperature of the 50 mLs sample is 50 ˚C what would be the final temperature of the 100 mLs sample?

        A.   50 ˚C
        B.   80 ˚C
        C.   25 ˚C
        D.   100 ˚C
   E.   35 ˚C

Explain:

2.   Two containers each have 50 mLs of water at 20 ˚C initially. They are each heated with the same source of heat. One is heated for ten minutes and the other for five minutes. If the container that was heated for five minutes has a final temperature 30 ˚C what would be the final temperature of the other sample?
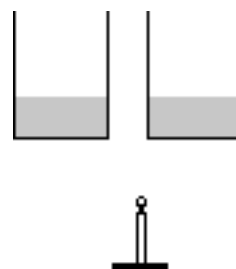
        A.   35 ˚C
        B.   40 ˚C
        C.   60 ˚C
        D.   25 ˚C
        E.   30 ˚C

Explain:

3.   Two containers of water are at 20 ˚C initially. One contains 50 g of water and is heated by a source for a specified time to a final temperature of 30 ˚C. The second container has an unknown amount of water and is heated with the same source to 30 ˚C. However, it takes twice as long to get to this final temperature. How much water is in this container?
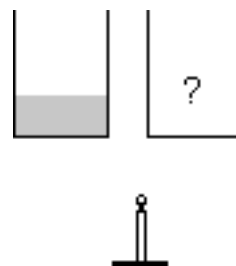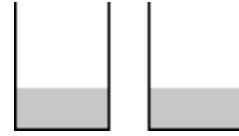
        A.   100 g
        B.   25 g
        C.   30 g
        D.   50 g
        E.   75 g

Explain:

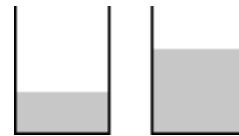4.   50 mLs of water at 80 ˚C is added to 50 mLs of water at 20 ˚C. What would be the final temperature?

        A.   60 ˚C
        B.   40 ˚C
        C.   30 ˚C
        D.   20 ˚C
        E.   50 ˚C

Explain:

5.   50 mLs of water at 80 ˚C is added to 100 mLs of water at 20 ˚C. What would be the final temperature?

        A.   70 ˚C
        B.   40 ˚C
        C.   30 ˚C
        D.   60 ˚C
        E.   50 ˚C

Explain:

6.   50 g of water at 80 ˚C is added to 50 g of ethyl alcohol at 20 ˚C. What would be the approximate final temperature?

        A.   60 ˚C
        B.   40 ˚C
        C.   30 ˚C
        D.   20 ˚C
        E.   50 ˚C

Explain: