



A bag of chocolate candy has 220 Cal. How much energy is this in kJ?

- a. 92 kJ
- b. 53 kJ
- c. 19 kJ
- d. 47 kJ
- e. 22 kJ



**For a system that gains thermal energy and does work on the surroundings,**

- a. heat ( $q$ ) and work ( $w$ ) are both positive.
- b. heat ( $q$ ) is positive and work ( $w$ ) is negative.
- c. heat ( $q$ ) is negative and work ( $w$ ) is positive.
- d. heat ( $q$ ) and work ( $w$ ) are both negative.



Calculate the internal energy,  $\Delta E$ , for a system that does 422 J of work and loses 227 J of energy as heat.

- a. + 649 J
- b. - 649 J
- c. 0 J
- d. - 195 J
- e. + 195 J