Solution:

(1)

If they do not use LCM method with LIFO, then we see that the June 1 inventory valuation will be as follows:

- 100 units @ $10, and
- 20 units @ $12

Thus, the June 1 inventory valuation will be given by $1,240.

(2)

If they use the LCM method with LIFO, then the stock that is valued at $13 should be valued at $12. However, all of this stock is sold out and the left stock is all below $12, which means that there is no change required for the June 1 inventory valuation.

(3)

If they do not use LCM method with FIFO, then we see that the June 1 inventory valuation will be as follows:

- 100 units @ $13, and
- 20 units @ $12

Thus, the June 1 inventory valuation will be given by $1,540.

(4)

If they use the LCM method with FIFO, then the stock that is valued at $13 should be valued at $12.

Thus, the valuation becomes $1,440, since all stock at $13 will be written down to $12.