

# NEXT-TIME QUESTION

CONCEPTUAL Physics



She holds the book stationary against the wall as shown. Friction on the book by the wall acts

- a) upward.
- b) downward.
- c) Can't say.

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Answer: c

Why? If she barely pushes the book so the vertical component of her push is less than the book's weight, then friction acts upward to keep the book stationary. If she pushes so the vertical component of her push equals the book's weight, then there's zero wall friction on the book. Or if she pushes harder so the vertical component of her push exceeds the book's weight, then friction acts downward. So unless we know how the vertical component of her push compares with the weight of the book,

we can't specify the direction of friction between the book and the wall.

