Shelves

Pete is making a bookcase for his books and other stuff.

He already has plenty of bricks and can get planks of wood for $2.50 each.

Each plank of wood measures 1 inch by 9 inches by 48 inches. Each brick measures 3 inches by 4.5 inches by 9 inches.

For each shelf, Pete will put three bricks at each end then put a plank of wood on top. The diagram shows three shelves.

1. Pete wants five shelves in his bookcase.
   a. How many planks of wood does he need? 
   b. How many bricks does he need? 
   c. How high will the shelves be? 
   d. How much will the bookcase cost?
The diagram below shows graphs with the following descriptions:

Description One: The cost of the bookcase against the number of shelves.
Description Two: The number of bricks against the number of shelves.
Description Three: The height of the bookcase against the number of shelves.
Description Four: The width of the bookcase against the number of shelves.

The equations of the graphs are

\[ y = 48, \quad y = 10x, \quad y = 6x, \quad y = 2.5x \]

2. Complete this table to match each graph with its description and its equation.

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<thead>
<tr>
<th>Graph letter</th>
<th>Description number</th>
<th>Equation</th>
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