Taxi Cab Problem – Practice Test Versions

Four friends used the same taxi service to meet at a restaurant for dinner. When they arrived at the restaurant, they compared their cab fare and tried to figure out a rule that the taxi company used to calculate cost.

<table>
<thead>
<tr>
<th>Passenger</th>
<th>Distance (in miles)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denise</td>
<td>1</td>
<td>$4.50</td>
</tr>
<tr>
<td>Mark</td>
<td>6</td>
<td>$12</td>
</tr>
<tr>
<td>Solange</td>
<td>3</td>
<td>$7.50</td>
</tr>
<tr>
<td>Kate</td>
<td>8</td>
<td>$15</td>
</tr>
</tbody>
</table>

1) Which linear function models the relationship between the number of miles driven, \( m \), and the cost of the cab ride, \( C \)?
   a) \( C = 4.5m \)
   b) \( C = 2.5m \)
   c) \( C = 1.5m + 3 \)
   d) \( C = 3m + 1.50 \)

2) Which linear function models the relationship between the number of miles driven, \( m \), and the cost of the cab ride, \( C(m) \)?
   a) \( C(m) = 4.5m \)
   b) \( C(m) = 2.5m \)
   c) \( C(m) = 1.5m + 3 \)
   d) \( C(m) = 3m + 1.50 \)
Four friends used the same taxi service to meet at a restaurant for dinner. When they arrived at the restaurant, they compared their cab fare and figured out they could calculate the cost of a ride using the following function: \( C = 1.5m + 3 \), where \( m \) is the number of miles traveled and \( C \) is the cost of the ride.

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3) Which statement is true about the cab fare?
   a) The ride costs $4.50 for each mile.
   b) The ride costs $3.00 for each mile driven plus $1.50
   c) For each 10 miles driven, the cab ride costs $18.00
   d) The ride costs $1.50 for each mile plus a flat fee of $3.00

4) Halfway through the meal, Isabel arrives. She used the same taxi service and paid $22.50 for the ride.
   What distance did she travel?

5) A taxi company uses the function \( C(m) = 1.5m + 3 \) to calculate the cost of a taxi ride.
   - \( C(m) \) is the total cost (in dollars) of the ride
   - \( m \) is the number of miles traveled
   What do the values 1.5 and 3 represent in the function?
   a) The cost to ride a taxi 3 miles is $1.50.
   b) The cost to ride a taxi 1.5 miles is $3.00.
   c) The cost of a taxi is $1.50 plus $3.00 per mile.
   d) The cost of a taxi is $3.00 plus $1.50 per mile.
6) Four friends used the same taxi service to meet at a restaurant for dinner. The graph to the right shows the distance traveled, in miles, and the cost of each friends’ ride.

If \( C \) is the cost of a ride that is \( m \) miles, which function can be used to calculate the cost of a taxi ride?

a) \( C = 4.5m \)

b) \( C = 2.5m \)

c) \( C = 1.5m + 3 \)

d) \( C = 3m + 1.50 \)

7) How much would it cost to ride for 10 miles?