

Functions 8.F.2 Post-Test

Please do not use a calculator.

Answer the following questions comparing function equations, graphs, tables and descriptions.

Your family is deciding which activity to participate in while on your vacation in San Diego. Here is the information about the cost (c) for admission for all of your family members (f). Included in the cost is the parking fee for each.

<p>City Tour Charges \$30 per family member plus a \$15 parking fee</p> <p style="text-align: center;">$C = 30f + 15$</p>	<p>San Diego Zoo Cost is modeled by the equation $c = \left(\frac{75}{2}\right)f + 10$</p> <p style="text-align: center;">$C = 37.5f + 10$</p>												
<p>SeaWorld</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>$m = \frac{90}{2}$ $m = 45$</p> </div> </div> <p style="text-align: center;">$C = 45f + 30$</p>	<p>Kayaking</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">f</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">6</td> <td style="padding: 5px;">8</td> <td style="padding: 5px;">10</td> </tr> <tr> <td style="padding: 5px;">c</td> <td style="padding: 5px;">65</td> <td style="padding: 5px;">105</td> <td style="padding: 5px;">145</td> <td style="padding: 5px;">185</td> <td style="padding: 5px;">225</td> </tr> </table> <p style="text-align: center;">$m = \frac{40}{2} = 20$</p> $\begin{array}{r} 65 = 20(2) + b \\ 65 = 40 + b \\ -40 \quad -40 \\ \hline 25 = b \end{array}$ <p style="text-align: center;">$C = 20f + 25$</p>	f	2	4	6	8	10	c	65	105	145	185	225
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c	65	105	145	185	225								

1. Which activity is the cheapest per family member, and how do you know?
 City Tour = \$30 Zoo = \$37.50 SeaWorld = \$45 Kayaking = \$20
 lowest slope
2. Which activity is the most expensive per family member, and how do you know?
 SeaWorld - highest slope
3. Which activity has the cheapest parking fee, and how do you know?
 City Tour = \$15 Zoo = \$10 SeaWorld = \$30 Kayaking = \$25
 lowest initial value (y-int)
4. Which activity has the most expensive parking fee, and how do you know?
 SeaWorld - highest initial value (y-int).
5. How many of your family members could you bring to each activity if you budgeted \$200?
 $200 = 30x + 15$ $200 = 37.50x + 10$ $200 = 45x + 30$ $200 = 20x + 25$
 $185 = 30x$ $190 = 37.50x$ $170 = 45x$ $175 = 20x$
 $6.1 = x$ $5.1 = x$ $3.8 = x$ $8.8 = x$
6. Which activity allows you to bring the most people for that amount of money?
6 5 3 8
7. How much would it cost at each activity to bring a family of 4?
 $y = 30(4) + 15$ $y = 37.50(4) + 10$ $y = 45(4) + 30$ $y = 20(4) + 25$
 $y = 135$ $y = 160$ $y = 210$ $y = 105$
8. Which activity is the cheapest for that many people?
 Kayaking