

# Solving Word Problems with the Design Recipe

Use The Design Recipe to create models for the word problems and write the appropriate functions.

<p>1. Write a function 'globo-gym' that takes in a number of months and produces the cost for attending the gym that many months when there is a \$150 initiation fee and a monthly fee of \$45/month.</p> <pre>fun globo-gym(months):   (45 * months) + 150) end</pre>	<p>2. Write a function 'rect-perimeter' that takes in the length and width of a rectangle and returns the perimeter of that rectangle.</p> <pre>fun rect-perimeter(L, W):   2 * (L + W) end</pre>	<p>3. Write a function 'lawn-area' that takes in a length and width of a lawn and returns the area of that rectangular lawn.</p> <pre>fun lawn-area(length, width):   length * width end</pre>
<p>4. Write a function 'rectprism-volume' that takes in the length, width, and height of a rectangular prism and returns the volume of a rectangular prism.</p> <pre>fun rectprism-vol(L, W, H):   (L * W) * H end</pre>	<p>5. Write a function 'rideshare', that takes in a number of miles and produces the cost of a ride for that many miles at \$2.50 plus \$1.50/mile.</p> <pre>fun rideshare(miles):   (1.50 * miles) + 2.50 end</pre>	<p>6. Write a function 'marquee' that takes in a message and returns that message in large gold letters.</p> <pre>fun marquee(my-message):   text(my-message,100,"gold") end</pre>
<p>7. Write a function 'split-tab' that takes in a cost and the number of people sharing the bill and splits the cost equally.</p> <pre>fun split-tab(cost, people):   cost / people end</pre>	<p>8. Write a function 'num-cube' that takes in a number and returns the cube of that number.</p> <pre>fun num-cube(number):   (number * number) * number end</pre>	<p>9. Write a function 'circle-area' that takes in a radius and returns the area of the circle.</p> <pre>fun circle-area(radius):   pi * num-sqr(radius) end</pre>
<p>10. Write a function 'tip-calculator' that takes in the cost of a meal and returns the 15% tip of that meal.</p> <pre>fun tip-calculator(cost):   0.15 * cost end</pre>	<p>11. Write a function 'minimum-wage', that takes in a number of hours worked and returns the amount a worker will get paid at \$10.25/hour.</p> <pre>fun minimum-wage(hours):   10.25 * hours end</pre>	<p>12. Write a function 'moving-truck' that takes in the days and number of miles driven and returns the cost of renting a truck. The truck is \$55 per day and each driven mile is 15¢.</p> <pre>fun moving-truck(days, miles):   (55 * days) + (.15 * miles) end</pre>