

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 <code>globo-gym</code> 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 <code>rect-perimeter</code> 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 <code>lawn-area</code> 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 <code>rectprism-vol</code> 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 <code>rideshare</code>, 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): (1.5 * miles) + 2.5 end</pre>	<p>6) Write a function <code>marquee</code> that takes in a message and returns that message in large gold letters.</p> <pre>fun marquee(message): text(message, 100, "gold") end</pre>
<p>7) Write a function <code>split-tab</code> 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 <code>num-cube</code> that takes in a number and returns the cube of that number.</p> <pre>fun num-cube(n): (n * n) * n end</pre>
<p>9) Write a function <code>circle-area</code> that takes in a radius and returns the area of the circle.</p> <pre>fun circle-area(radius): 3.14 * num-sqr(radius) end</pre>	<p>10) Write a function <code>tip-calculator</code> 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 <code>minimum-wage</code>, that takes in a number of hours worked and returns the amount a worker will get paid at \$10.25/hr.</p> <pre>fun minimum-wage(hours): 10.25 * hours end</pre>	<p>12) Write a function <code>moving</code> 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(days, mi): (55 * days) + (0.15 * mi) end</pre>