



If you Hopped Like a Frog

Read the story “If You Hopped Like a Frog” by David Schwartz. Then pick your own example below. Create your own “If you could” poster. Be sure to include the following:

- The “if” statement
- Proportional representation of the mathematics in your “if” statement.

1. A dolphin’s brain is 7 times larger than the human brain (average human brain is 140 mm wide and 167 mm long). Make a visual representation of a human brain and a dolphin brain on paper	2. A snake can open its jaws to 5 times its normal size to eat. Show with a visual representation what the jaws would look like if humans could do the same thing.
3. Cockroaches move 50 body lengths per second. If humans moved at the same rate, how fast would we move? How would you demonstrate that speed?	4. A giraffe’s neck is almost half its total height. If the human neck was in the same proportion, how long would it be? Create a visual model to represent that relationship.
5. The orangutan’s reach (arm span) from finger-tip to finger-tip is 10 times the size of its hand. If humans had the same proportions, what would their arm span be? Create a model to visually represent that arm span.	6. A moth eats 86,000 times its own body weight in its first 56 days of life. If human babies did the same, how much baby food (in ___ ounce jars) would a 7 pound human baby eat in 56 days?
7. At birth a kangaroo baby is only a sixtieth the size of its mother in length. If a human baby were in the same proportion to its mother, how long would the baby be? Make a visual representation to show this relationship.	8. A pygmy shrew eats its own body weight in food every three hours. How much food would a human with the same characteristic eat in 24 hours? Using a food item found in the room, how much of that item would we eat?
9. A kiwi bird lays an egg that is three-fourths its size. If a human had the same characteristics, how big would the egg be? Create a visual representation to show what the egg would look like.	10. A flea can jump 100 times its height. If a human could do the same thing, how high could it jump? Show that in a visual representation.

<p>11. The scarab beetle can lift 850 times its own weight. If a human could do the same thing, how much could a human lift? Using an item in the room, create a concrete representation of this relationship.</p>	<p>12. Cows produce one-eighth of their weight in saliva every day. If humans did the same thing, how much saliva would they produce? Using an item in the room, create a concrete representation, or a visual representation of this relationship.</p>
<p>13. A red deer's antlers are as wide as $\frac{3}{5}$ of its body length. If a human had antlers in the same proportion, how wide would they be? Show this relationship visually or with concrete objects in the room.</p>	<p>14. An African elephant's ears are half of its height. If a human's ear were in the same proportion, how big would they be? Show this visually or with concrete materials.</p>
<p>15. A baby crocodile grows to be 4000 times its weight at birth. How much would a 7-pound human baby weigh as an adult? Show your representation visually or with concrete materials.</p>	<p>16. A bee can pull 300 times its weight. If a person could pull a load in this same proportion, how many pounds could a 200-pound man pull? Show visually or with concrete materials.</p>
<p>17. The sperm whale's head is $\frac{1}{3}$ of its body. If the human's head were in the same proportion, how big would it be? Show this representation visually.</p>	<p>18. A polar bear can eat 10 percent of its body weight in 30 minutes. If a human could do the same, how much would it eat in 30 minutes? Show a visual or concrete representation of this relationship.</p>
<p>19. An octopus' arms are seven-tenths of its length. If human's arms were in the same proportions, how long would they be? Show this representation visually or concretely by using an item or items in the room.</p>	<p>20. A proboscis monkey's nose is approximately one-seventh of the monkey's length. If a human nose were in the same proportion, how long would it be? Show this representation visually.</p>