**Lower Elementary:**

*Question:* A baby saltwater crocodile hatches from its egg with black stripes. After 48 months, the stripes disappear. How many years old is the crocodile when it loses its stripes?

**Upper Elementary:**

*Question:* A platypus eats 3/4 of a pound of worms each day. If a platypus has eaten 3 ounces of worms, what fractional part of its daily worm intake has it consumed?

****

**Middle School:**

*Question:* When a baby kangaroo is born, it’s only 2 centimeters long from snout to tail. An adult kangaroo is 21/4 meters long. What percentage of the adult kangaroo’s length is the baby kangaroo?

**Algebra and Up:**

*Question:* Koalas have very small brains. An adult koala that weighs 20 pounds has a brain that weighs 3/4 of an ounce. A typical human brain-to-body weight ratio is 1:40. What is the koala’s brain-to-body weight ratio? How does the koala’s brain-to-body ratio compare to the human’s as a fraction?

**Lower Elementary:**

*Question:* A baby saltwater crocodile hatches from its egg with black stripes. After 48 months, the stripes disappear. How many years old is the crocodile when it loses its stripes?

*Answer:* 4 years

*Solution:* There are 12 months in a year. Since 12 + 12 + 12 + 12 = 48, the crocodile is 4 years old when it loses its stripes.

**Upper Elementary:**

*Question:* A platypus eats 3/4 of a pound of worms each day. If a platypus has eaten 3 ounces of worms, what fractional part of its daily worm intake has it consumed?

*Answer:* 1/4

*Solution:* There are 16 ounces in a pound. Since the platypus eats 3/4 of a pound of worms each day, that means it eats 3/4 of 16 ounces = 12 ounces of worms each day. If the platypus has eaten 3 ounces so far, it has eaten 1/4 of its daily intake of worms because 3 is 1/4 of 12.

****

**Middle School:**

*Question:* When a baby kangaroo is born, it’s only 2 centimeters long from snout to tail. An adult kangaroo is 21/4 meters long. What percentage of the adult kangaroo’s length is the baby kangaroo?

*Answer:* 4/5%

*Solution:* Before we solve this problem, we need to know that there are 100 centimeters in a meter, so the adult kangaroo is 250 centimeters long. One way to solve this problem is to set up a proportion. As a fraction, the baby kangaroo’s length is 2/250 of the length of the adult kangaroo. To turn this fraction into a percentage, we can find an equivalent fraction out of 100 because percent means “for each hundred.” Since 100 is 2/5 of 250, we can multiply both the numerator and the denominator by 2/5 to get our percentage: the baby kangaroo is 4/5% the length of the adult kangaroo.

**Algebra and Up:**

*Question:* Koalas have very small brains. An adult koala that weighs 20 pounds has a brain that weighs 3/4 of an ounce. A typical human brain-to-body weight ratio is 1:40. What is the koala’s brain-to-body weight ratio? How does the koala’s brain-to-body ratio compare to the human’s as a fraction?

*Answer:* The koala’s brain-to-body weight ratio is 3:1,280, which is 3/32 of a human’s brain-to-body weight ratio.

*Solution:* The koala weighs 20 × 16 = 320 ounces, so its brain-to-body weight ratio is 3/4:320 = 3:1,280. We can rewrite ratios as fractions, so to solve this problem, we need to find what fractional part 3/1,280 is of 1/40. To do this, we can solve 1/40***x*** = 3/1,280 and find that ***x*** = 3/32. So, the koala’s brain-to-body weight ratio is 3/32 of a human’s brain-to-body weight ratio.