Method 1

Since the T. Rex’s 570-pound skull is 15%, or $\frac{15}{100} = \frac{3}{20}$, of the combined weight $b$ of all its bones, we can set up the proportion $\frac{570}{b} = \frac{3}{20}$. Cross-multiplying and solving for $b$ gives us $3b = 570 \times 20 \rightarrow 3b = 11,400 \rightarrow b = 11,400 \div 3 = 3800$ pounds. So, the combined weight of all the T. Rex’s bones is 3800 pounds, which we are told is 21%, or $\frac{21}{100}$, of the total weight $t$ of the T. Rex. We can set up another proportion, namely, $\frac{3800}{t} = \frac{21}{100}$. Cross-multiplying and solving for $t$ gives us $21t = 3800 \times 100 \rightarrow 21t = 380,000 \rightarrow t = 380,000 \div 21 \approx 18,095$ pounds.

Method 2

We are told that the T. Rex’s 570-pound skull accounts for 15% of 21% of its total weight $t$. Based on this, we can write the equation $0.15 \times 0.21 \times t = 570$. So, the T. Rex’s total weight is $t = 570 \div (0.15 \times 0.21) = 570 \div 0.315 \approx 18,095$ pounds.