

▶ Extending Concepts



The Katch-McArdle Formula The Katch-McArdle formula for basal metabolic rate applies to both men and women. In Exercises 23–30, use the formula.

$$\begin{array}{l} \text{Basal metabolic rate} \\ \text{(calories per day)} \end{array} = 370 + 9.8 \times \text{lean body mass (lb)}$$

23. Make a graph for the Katch-McArdle formula. Describe any trends in the graph.
24. How much does one additional pound of lean body mass increase a person's basal metabolic rate?
25. Find the basal metabolic rate for a person with 100 pounds of lean body mass.
26. Find the basal metabolic rate for a person with 130 pounds of lean body mass.
27. Find the basal metabolic rate for a person who weighs 160 pounds and has a body fat percentage of 25%.
28. Find the basal metabolic rate for a person who weighs 175 pounds and has a body fat percentage of 20%.
29. How many calories per day does this person need to take in to maintain his weight?
30. How many calories per day does this person need to take in to maintain her weight?

