Energy expenditure (calories burned) equation for running

Only Some of us who that we are responsible for our bodies and they go to club or the have their own treadmill, the treadmill has a great screen built by computer scientist that can read your:

1. Heart rate: by a sensor you hold with your hands
2. Weight
3. Time
4. Age: which you select at the first

And Pass them in the following formula to print your calories burned.

- Now Someone asked you to build this software that run on this treadmill and you are not a doctor to know the formula but you did a search and got this result:

  - Men use the following formula:

    Calories Burned = [(Age x 0.2017) + (Weight x 0.09036) + (Heart Rate x 0.6309) -- 55.0969] x Time / 4.184.

  - Women use the following formula:

    Calories Burned = [(Age x 0.074) -- (Weight x 0.05741) + (Heart Rate x 0.4472) -- 20.4022] x Time / 4.184.

  ☒ Calculation Example

For example, here's my formula based on a 49 year old male weighing 155 for a workout where my heart rate averages about 148 bpm throughout a 60-minute FitCamp workout.

[(49 x 0.2017) + (155 x 0.09036) + (148 x 0.6309) – 55.0969] x 60/4.184 =

[9.8833 + 14.0058 + 93.3792 – 55.0969] x 14.3403 = 891.47 calories (or 15 kcal/min)

Now this is your time to turn it into a code!