Pulse and Blood worksheet

1. Jane counted 13 pulse beats in 10 seconds. What is Jane’s pulse in beats per minute?

2. Brittany counted 31 pulse beats in 20 seconds. What is her pulse in beats per minute?

3. When Emma exercises she keeps her pulse at 140 beats per minute. How many times will Emma’s heart beat during five 1-hour exercise sessions?

4. The mass of the blood in the human body is 7% of the total body mass.
   a. Jackson’s mass is 75 kg. What is the mass of his blood?
   b. One litre of blood weighs 1060 grams. How many litres of blood are in Jackson’s body? Express your answer correct to 2 decimal places.

5. A person’s maximum heart rate, R, at age A years can be calculated using the formula R = 220 – A.
   a. Larissa is 18 years old. What is her maximum heart rate?
   b. The optimal heart rate range during exercise is between 60% and 80% of a person’s maximum heart rate. What is Larissa’s optimal exercise heart range?

6. When Peter trains he likes his heart rate to be 75% of his maximum heart rate. Peter trains at a heart rate of 150 beats per minute. How old is Peter?

7. David’s resting pulse is 62 beats per minute and when he exercises his pulse is 145 beats per minute. After David finishes exercising his pulse drops by 15 beats each minute until it reaches his resting pulse. David finished working out in the gym at 7:55 am. At approximately what time will his pulse be back to his normal resting pulse?

8. Imagine that your heart beats at an average rate of 65 beats per minute. How many times will your heart beat from your birth to your 16th birthday?

Answers

1. 78 beats/minute
2. 93 beats/minute
3. 42 000
4a. 5.25 kg
4b. 4.95 litres
5a. 202
5b. 121 to 162 beats/minute
6. 20 years
7. Between 8:00 am and 8:01 am
8. 546 998 400

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