

## Heart Rate Logic Puzzle

Place an X in the boxes for answers that are false, and an O in the boxes for answers that are true. Use the clues to solve this puzzle and to discover the ages and heart rates for each person.

CLUES:

1. The person with the lowest heart rate is older than Fiona.
2. Aoife is 10 years old.
3. Fiona's heart rate is 100 beats per minute.
4. Alan is one year younger than the person with the second highest heart rate.

		Ages				Heart Rates			
		10 years	11 years	12 years	13 years	90 beats per minute	100 beats per minute	110 beats per minute	120 beats per minute
Names	Alan								
	Sam								
	Fiona								
	Aoife								
Heart Rates	90 beats per minute								
	100 beats per minute								
	110 beats per minute								
	120 beats per minute								

Names	Ages	Heart Rates
Alan		
Sam		
Fiona		
Aoife		

#### HEART FACTS:

- Your heart beats **100,000** times in one day.
- You would have to leave your tap running for **46 years** in order to equal the amount of blood your heart pumps during an average lifetime.
- Your heart rate is how many times your heart beats per minute.
- Children usually have a heart rate between **90 and 120** beats per minute when resting.
- Adults usually have a heart rate between **60 and 100** beats per minute when resting.

#### HOW EXERCISE EFFECTS YOUR HEART AND BLOOD VESSELS:

- Exercise makes your heart stronger to pump more blood with less effort.
- Exercise also signals the release of **nitric oxide** by the cells lining the insides of the blood vessels (**endothelial cells**).
- This causes the cells that form the blood vessel walls (**smooth muscle cells**) to stay relaxed.
- The relaxed smooth muscle cells widen your blood vessels which lowers your **blood pressure**.

#### INTERVAL TRAINING:

- Interval training is a great way to strengthen your heart to pump blood more efficiently.
- Interval training combines short bursts of high intensity exercises with recovery periods of lower intensity exercises.
- For example, instead of just running at the same pace continuously, with the interval training technique you would run really hard and fast for 30 seconds, followed by jogging lightly for two minutes.
- You can use all sorts of exercises and just vary the intensity such as cycling, jumping roping, and even walking.
- Great daily interval training workouts for the family can be found at: <https://www.facebook.com/nrg.desk>

#### ANSWERS:

Names	Ages	Heart Rates
Alan	12	90
Sam	13	110
Fiona	11	100
Aoife	10	120

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