

# Exercise walk-through

Circulatory systems ■ 9.1

eXercise

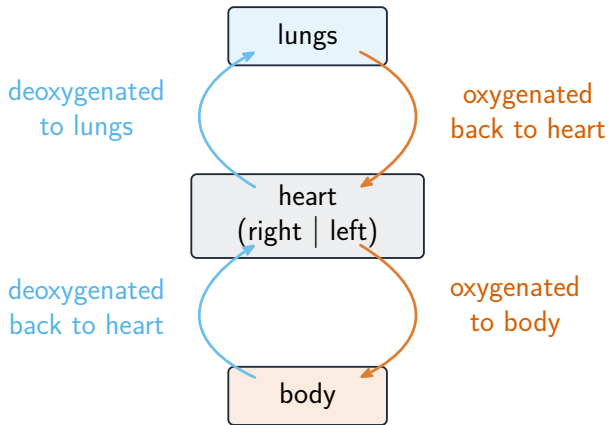
## You must be able to

- name the parts of the circulatory system
- compare single and double circulation
- explain the advantage of a double circulation

## Method — Double circulation

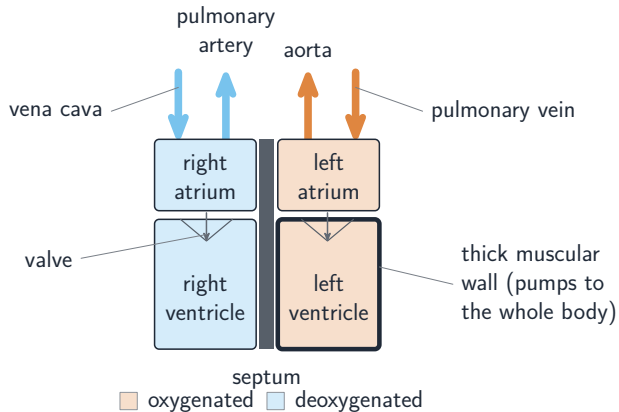
- **system:** a pump (heart), blood vessels, valves (one-way flow).
- **advantage:** blood is re-pumped at high pressure before going to the body → fast oxygen delivery.

## Method — Double circulation



*Blood passing through the heart twice on each trip*

# Method — Double circulation



*The heart pumps the double circulation*

## Practice 2.1 ■ 3 marks

Name the three parts of the circulatory system.

## Solution 2.1

### Worked steps

a pump (heart); blood vessels; valves **B1** **B1** **B1**.

## Practice 2.2 ■ 1 mark

State how many times blood passes through the heart in a single circulation.

## Solution 2.2

Method: Double circulation

### Worked steps

once **B1**.

## Exam-style 3.1 ■ 1 mark

In a double circulation, blood passes through the heart:

**A** once per trip

**B** twice per trip

**C** never

**D** four times per trip

## Solution 3.1

Method: Double circulation

**A** once per trip

**B** twice per trip



**C** never

**D** four times per trip

### Worked steps

**B.** In a double circulation blood passes through the heart twice per trip.

## Exam-style 3.2 ■ 2 marks

Mammals have a double circulation.

- (a) State the advantage of a double circulation.
- (b) State the job of the valves in the circulatory system.

## Solution 3.2

Method: Double circulation

### Worked steps

- (a) blood can be pumped again at high pressure before going to the body **M1**; so it travels faster and delivers oxygen quickly **A1**.
- (b) they keep the blood flowing one way only **B1**.