

## 8 Transport in mammals — Part 1 — Answers

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### Answers

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Work through these after trying the questions yourself.

**8.1** The blood passes through the heart twice for each complete trip around the body.

**8.2** (a) the pulmonary circulation \ (b) the systemic circulation.

**8.3** It carries blood at high pressure away from the heart; the thick wall withstands the pressure and the elastic fibres stretch and recoil to smooth the flow.

**8.4** It gives a very short distance for substances to diffuse between the blood and the cells, so exchange is fast.

**8.5** They stop the blood flowing backwards.

**8.6** Tissue fluid is the liquid around the body cells; it is formed when high pressure pushes liquid (plasma without cells or large proteins) out through the capillary wall.

**8.7** An artery is defined as a vessel that carries blood *away from the heart* — not by whether the blood carries oxygen. The pulmonary artery carries blood away from the heart to the lungs, so it is an artery even though that blood is deoxygenated.