

## Felix's Fall

When Felix Baumgartner landed on his feet in the New Mexico desert on the 14th October 2012, he had just jumped from a height of 24 miles above the Earth.

Baumgartner, an Austrian skydiver, was 43 when he jumped out of a small capsule that had been carried by a helium balloon into the Earth's atmosphere. He reached a speed faster than that of a jumbo jet and became the first person to break the sound barrier without an engine. He also created a new record for the highest skydive. The existing record had been set by an American Air Force Colonel called Joe Kittinger, 52 years earlier. Kittinger helped Baumgartner to prepare and was in the control room for the jump.

### What is the Sound Barrier?

Sound travels at a speed of about 767 miles per hour, depending on the air temperature. When objects like the tip of a whip or a bullet move faster than that, a sharp crack is heard. This is called 'breaking the sound barrier'.

The feat was incredibly dangerous. Baumgartner could have suffered from oxygen starvation, extreme temperatures or his parachute accidentally opening.

### What is the Armstrong Limit?

At heights greater than about 12 miles, blood in the human body will boil.

The 12-mile point is called the Armstrong Limit.

Because he was above the Armstrong Limit, his blood would have boiled if his protective suit had ripped. Within the first minute of the jump, Baumgartner's body began to spin at high speeds, but fortunately he regained control, and he opened his parachute after free-falling for over 4 minutes.

Rather unsurprisingly, the triumphant Baumgartner is now planning to retire from the daredevil business and find employment as a helicopter pilot.



1. Where did Baumgartner jump from?

Tick **one** box.

the Armstrong Limit

New Mexico

the sound barrier

the Earth's atmosphere

1 mark

2. *He reached a speed faster than that of a jumbo jet*

Explain how comparing Baumgartner to a jumbo jet helps the reader to understand his speed.

.....

.....

1 mark

3. What does the word *feat* mean in the text?

Circle the correct option.

**danger**

**forfeit**

**failure**

**stunt**

1 mark

4. *Baumgartner could have suffered oxygen starvation...*

What does the word *starvation* tell you about the amount of oxygen available?

.....

1 mark

5. How high is the Armstrong Limit?

.....

1 mark

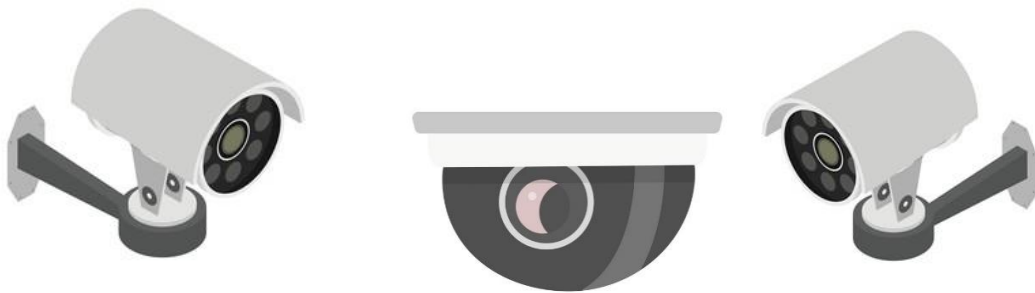
6. How do you think Joe Kittinger felt as he sat in the control room?  
Explain your answer using evidence from the text.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

3 marks



*Only Scroll down if you have finished your homework.*





*Answers to be revealed on the next page!*



Test 6 — Pages 55-57

**1. 1 mark**

*the Earth's atmosphere*  
(2b)

**2. 1 mark for a sensible answer, e.g.**

*"The reader can imagine how fast a jumbo jet goes, so it helps them to imagine Felix's speed."*  
(2d)

**3. 1 mark**

*stunt*  
(2a)

**4. 1 mark for a sensible answer, e.g.**

*"there is not enough oxygen available."*  
(2a)

**5. 1 mark**

*12 miles*  
(2b)

**6. 1 mark for suggesting how Kittinger would feel with one piece of supporting evidence, e.g.**

*"He would feel nervous, because he knew the risks involved in the jump."*

**2 marks for suggesting how Kittinger would feel with two pieces of supporting evidence, e.g.**

*"He would feel nervous, because he knew that the jump was risky, and he was the one who helped Felix to prepare."*

**3 marks for suggesting how Kittinger would feel with three pieces of supporting evidence, OR for suggesting multiple feelings, each with supporting evidence, e.g.**

*"He would feel nervous, because he knew that the jump was risky. He might also feel a bit sad that his record was about to be broken."*  
(2d)