

1 X-rays are often used to investigate injuries inside the body. The photograph shows an X-ray of a hand.

The X-ray photograph is produced on white film that reacts to X-rays. The parts of the film that are exposed to X-rays turn black.



1 (a) Which of the following properties of X-rays allows an image to be formed on the film.

Tick ✓ the correct box(es).

[2 marks]

They can ionise atoms

They are transmitted by healthy tissue

They are absorbed by metal and bone

They are part of the electromagnetic spectrum

1 (a) (i) Another way of using X-rays is in a computer tomography scanner (CT scanner).

Give one advantage and one disadvantage of using a CT scanner to produce images inside the body.

[2 marks]

Advantage .....

.....

.....

.....

Disadvantage .....

.....

.....

.....

1 (b) X-rays are not used to produce images of babies in the womb.  
Use your understanding of X-rays to explain why.

**[4 marks]**

.....

.....

.....

.....

.....

.....

.....

.....

.....

**(Total 8 marks)**