

0 1

Copper metal is used for electric wires.

Open-cast mining of copper ore makes a very large hole.



0 1

1

Suggest **one** environmental problem that is caused by open-cast mining of copper ore.

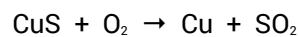
[1 mark]

.....

.....

Some copper ores contain copper sulfide, CuS.

Copper sulfide is heated in air to produce copper and sulfur dioxide.



0 1

2

Suggest **one** environmental problem caused by heating copper sulfide in air.

[1 mark]

.....

.....

The amount of copper-rich ores is estimated to last only a few more years. New houses need several kilometres of copper wire.

0 1

3

Explain why the need to use so much copper will cause a problem in the future.

[1 mark]

.....

.....

0 1 . 4

Suggest **two** ways in which society could overcome this problem.

[2 marks]

1

.....

2

.....

0 2

Some information about four fuels is given in the table.

Fuel	Type	Heat released in kJ per g	Combustion products			Type of flame
			CO ₂	SO ₂	H ₂ O	
Bio-ethanol	Renewable	29	✓		✓	Not smoky
Coal	Non-renewable	31	✓	✓	✓	Smoky
Hydrogen	Renewable	142			✓	Not smoky
Natural gas	Non-renewable	56	✓		✓	Not smoky

From this information a student made two conclusions.

For each conclusion, state if it is correct **and** explain your answer.

0 2 . 1

“Renewable fuels release more heat per gram than non-renewable fuels.”

[2 marks]

.....

.....

.....

.....

0 2 . 2

“Non-renewable fuels are better for the environment than renewable fuels.”

[2 marks]

.....

.....

.....

.....

.....

(Total 9 marks)

End