

6. Wild strains of yeast were grown in a fermenter to produce ethanol.  
Stages of the process occurring in the fermenter are shown in the diagram.



- (a) Name stage 1. 1
- \_\_\_\_\_
- (b) There is a net gain of ATP in stage 1. 1  
Explain why the ATP produced is described as a net gain.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- (c) Name gas X produced in stage 2. 1
- \_\_\_\_\_
- (d) High concentrations of ethanol kill wild strains of yeast.  
In an attempt to increase ethanol tolerance in yeast, a wild strain was exposed to UV light.  
Suggest why exposure to UV light may result in yeast cells that can survive in high concentrations of ethanol. 1
- \_\_\_\_\_
- \_\_\_\_\_
- (e) Fermentation can also occur in animal cells. 1  
Name the product that pyruvate is converted to in animal cells.
- \_\_\_\_\_

[Turn over



\* X 8 0 7 7 6 0 1 1 1 \*