

Polythene: Answers

1. (a) $(12 \times 2) + (4 \times 1) = 28 \text{ g}$ [1]
- (b) (i) Chains will not all be of the same length. [1]
- (ii) $140,000 \div 28$ [1]
 $= 5000$ [1]
- (c) If the temperature rises particles move more [1]
Under pressure particles are closer together [1]
More collisions lead to more particles joining together and so longer chains [1]
- (d) High density poly(ethene) No mark for this answer
Higher density means more particles in the same volume [1]
Fewer branches mean chains can be packed closer [1]