

Valid Arguments HW:

- 1** Write the converse and inverse for:
 - a** If Nicole is wearing a jumper, then she is warm.
 - b** If two triangles are similar, then they are equiangular.

- 2** Write down the contrapositives of these statements:
 - a** If a person is fair and clever then the person is a doctor.
 - b** All rose bushes have thorns.

- 6** Determine the validity of the following arguments:
 - a** Tan went to the movies or the theatre last night, but not both.
Tan did not go to the movies.
Therefore, Tan went to the theatre.
 - b** If x is a multiple of 4, then x is even.
Hence, if x is even, then x is a multiple of 4.
 - c** London is in China if and only if 20 is a multiple of 5.
20 is a multiple of 5.
Therefore, London is in China.
 - d** x is a factor of 30 or 50.
Hence, x is a factor of 50.
 - e** If the sequence is not geometric, then the sequence is arithmetic.
Therefore, the sequence is arithmetic or geometric.
 - f** All students like chips.
Melanie likes chips.
Hence, Melanie is a student.

- 5** Determine the validity of this argument:

If Jeremy is on the basketball team, then he is tall and fast.
Jeremy is tall and he is not on the basketball team.
Therefore, Jeremy is not fast.