Worksheet B: Arrangements investigation task 2   
continued

(e) Complete this statement.

There are ................................. arrangements of the 10 letters ABCDEFGHIJ

when each letter is used exactly once.

(f) Show how you found your answer.

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Q2 In how many different ways can the 8 characters

6 7 8 9 ) ( \* &

be arranged to make an 8-character pattern when

(a) each character can be used once only

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(b) each character can be repeated?

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Q3 Complete the following expressions for the number of different ways *n* different characters can be arranged to make a pattern that is *n* characters long when

You cannot write all the missing terms of the expression, so just write the first 3 and the last 3.

(a) each character can be repeated

*n* × \_\_\_\_ × \_\_\_\_ × \_\_\_\_ ×...... ...... × \_\_\_\_× \_\_\_\_ × \_\_\_\_ = \_\_\_\_

(b) each character can be used once only.

*n* × \_\_\_\_ × \_\_\_\_ × \_\_\_\_ ×...... ...... × \_\_\_\_× \_\_\_\_ × \_\_\_\_ = \_\_\_\_