Q1. You are given that $x^2 - 12x + a = (x - c)^2$

Work out the values of a and c.

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a = ...

c = ...

(Total 3 marks)

Q2. (a) Show that $x^2 - 8x + 20$

can be written in the form $(x - a)^2 + a$

where a is an integer.

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(3)

(b) Hence explain how you know that $x^2 - 8x + 20$ is always positive.

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(2)
(Total 5 marks)

Q3. Given that $x^2 + ax + b \equiv (x - 7)^2 - a$

work out the values of a and b.

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Answer a = ... b = ...

(Total 3 marks)