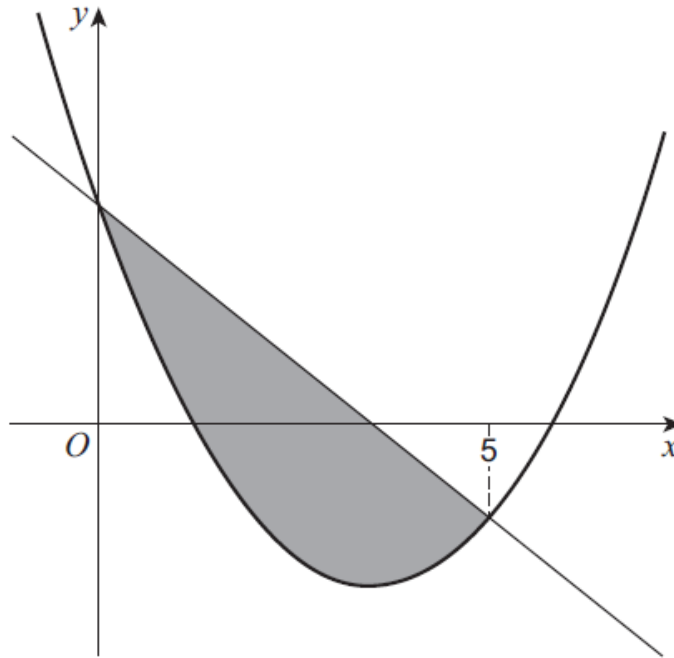


**Integration – A2 Mathematics P3**

1. June/2022/Paper\_7357/03/No.2

The shaded region, shown in the diagram below, is defined by

$$x^2 - 7x + 7 \leq y \leq 7 - 2x$$



Identify which of the following gives the area of the shaded region.

Tick (✓) **one** box.**[1 mark]**

$$\int (7 - 2x) dx - \int (x^2 - 7x + 7) dx$$

$$\int_0^5 (x^2 - 5x) dx$$

$$\int_0^5 (5x - x^2) dx$$

$$\int_0^5 (x^2 - 9x + 14) dx$$

2. June/2022/Paper\_7357/03/No.4

Find

$$\int (x^2 + x^{\frac{1}{2}}) dx$$

[2 marks]

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