

DO NOT WRITE IN THIS AREA

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- 25 Three taps, A , B and C , are used to fill a tank with water.
If each tap was opened to fill the tank on its own, then in 1 hour

Tap A would fill $\frac{1}{24}$ of the tank,

Tap B would fill $\frac{1}{48}$ of the tank,

Tap C would fill $\frac{1}{24x}$ of the tank.

All three taps are opened at exactly the same time and water flows into the tank from all three taps.

- (a) Find and simplify an expression, in terms of x , for the fraction of the tank that is filled in 1 hour.

(2)

Given that the tank will fill completely with water in 15 hours,

- (b) find the value of x .

$x = \dots$

(4)

(Total for Question 25 is 6 marks)



P 5 3 3 0 5 A 0 1 5 2 0