By the end of this fortnight, you should be able to:

• understand probability distributions for discrete random variables

• distinguish between discrete and continuous random variables

• construct probability histograms

• compute the central tendency and variability of discrete distributions (i.e. find the mean and variance of a discrete probability distribution)

• compute the 95% confidence interval for a random variable, given the mean and the variance

Focus for Week 13

* Practise more applications of integration and area
* Catch up on overdue mathspace.co tasks

Goals

**Week**

**Term**

**2020**

15

2

**Learning Brief MM3**

**area under curve**



Theoretical Components

Practical Components

JacPlus eBook *Year 12 Maths Quest Methods* (dark blue book) Chapter 9

Read and view worked examples 18 to 28

Watch these YouTube videos:

Approximating area under a curve using rectangles:

<http://www.rootmath.org/calculus/area-intro>

Exact area under the curve using definite

integral:

<http://www.youtube.com/watch?v=ODwkTt0RMDg&feature=relmfu>

<https://www.youtube.com/watch?v=GtCYrxxTjH4>

<https://www.khanacademy.org/math/ap-calculus-ab/fundamental-theorem-of-calculus-ab/fundamental-theorem-of-calculus-tut-ab/v/fundamental-theorem-of-calculus>

**Do the following questions**

Ex 9G Q2a,e,f Q4, Q11, Q14, Q19,

Ex 9H Q1a,e,f,g Q5, Q11, Q13, Q14

Ex 9J Q1 Q3 Q5 Q10 Q11

Investigation

**Please see next page**

QFO

Quiz/Forum/Other

No quiz for this week

**Week 15 Investigation**



Answer: a. 0.571 $unit^{2}$

Hint: The centre-radius form of the circle equation is in the format (x – h)2 + (y – k)2 = r2, with the centre being at the point (h, k) and the radius being "r".