23rd September

Write as a single fraction and simplify if possible
\[
\frac{14}{x^2 - 5x + 6} \div \frac{7}{x^2 + 3x - 10}
\]

Write in the form \((x + a)^2 + b\)
\[x^2 - 100x - 25\]

A PE test has two sections, theory and practical. Everyone in a class who took the PE test passed at least one section. 62% passes the theory section and 83% passed the practical section.

Represent this information on a Venn diagram

A student is selected at random.

Work out the probability that this person

(a) passed the theory section, given they passed the practical section.

(b) passed the practical section, given they passed only one section.

Calculate the area of triangle ABC.

Angle ADC = 78° and angle BAC = 20°