17th September **Higher Plus 5-a-day**

Corbettmaths

Write $4.\dot{1}6\dot{3}$ as a mixed number.
Give your answer in its simplest form.

$x = 4.163163...$

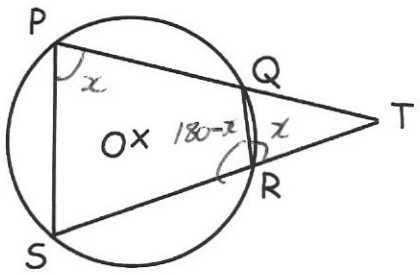
$1000x = 4163.163...$

$999x = 4159$

$x = \frac{4159}{999}$

$x = 4\frac{163}{999}$

P, Q, R and S are points on a circle, centre O. PQT and SRT are straight lines.



Prove angles SPQ and QRT are equal.

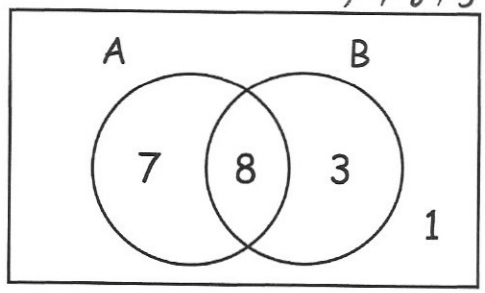
Let $\angle SPQ = x$

$\angle QRS = 180 - x$
as the opposite angles of a cyclic quadrilateral add to 180°

As
$\angle QRS = 180 - x$
then $\angle QRT = x$
as the angles in a straight line add to 180°

$\angle SPQ = \angle QRT$

ξ $7+8+3+1 = 19$



Which is larger?

$P(A \cap B')$ or $P(A' \cap B)$

$\frac{7}{19}$ $\frac{3}{19}$

$P(A \cap B')$

Sketch the graph of $y = 3x^2 + 5x + 2$ $y = (3x+2)(x+1)$

clearly show the coordinates of any points of intersection with the axes.

$(-1, 0)$ $(-\frac{2}{3}, 0)$

$(0, 2)$