

Challenging Area of Rectangle Question
(involving a common side)



The main aim of this math revision note is to help your child become better at solving PSLE Math area question that involves a common side.

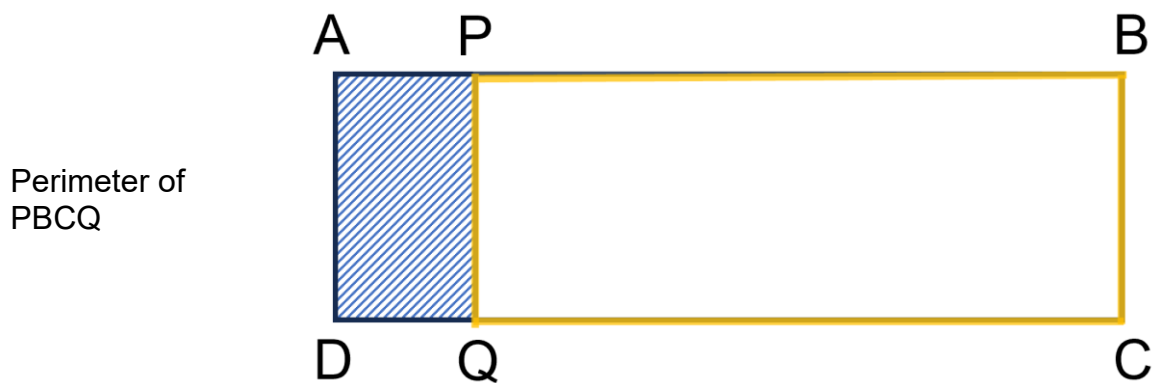
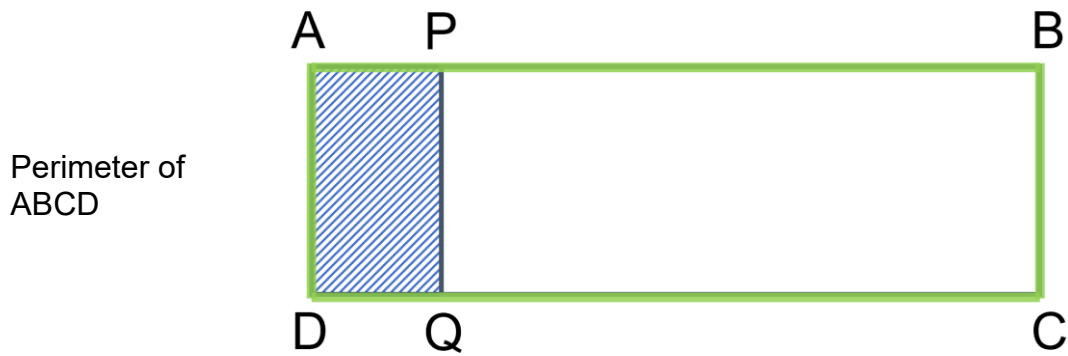
This kind of questions assesses your child's understanding and sense of proportion/ratio visually.

Question

The perimeter of rectangle $ABCD$ is 60 cm more than that of rectangle $PBCQ$. 15% of rectangle $ABCD$ is shaded. Find the length of QC .



Solutions



$PQ = AD$

We can shift
PQ to AD to
see the
difference
more clearly



Comparing
both
perimeters, we
can see the
extra parts for
the perimeter
of ABCD are
AP and DQ.



Therefore, AP and DQ makes up the difference.

$$AP + DQ = 60 \text{ cm}$$

$$\text{Since } AP = DQ$$

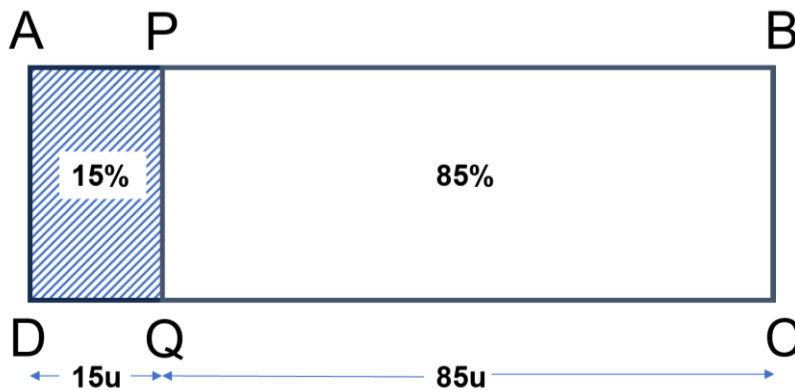
$$AP = 60 \text{ cm} \div 2 = 30 \text{ cm}$$

$$DQ = 30 \text{ cm}$$

Since 15% of the whole rectangle is shaded, we can see that

Shaded area = 15% of total

Unshaded area = $100\% - 15\% = 85\%$ of total



Since the rectangles share the same breadth, the ratio of the areas and the corresponding lengths will be the same.

Area ratio		=	Length ratio		
Shaded	:	Unshaded	DQ	:	QC
15 x AD	:	85 x AD	15	:	85

$$15u = 30 \text{ cm}$$

$$1u = 30 \text{ cm} \div 15 = 2 \text{ cm}$$

$$85u = 2 \text{ cm} \times 85 = 170 \text{ cm}$$

To Your Child's Success,



Ms Nelly Ke
 Math Specialist
 Jimmy Maths and Grade Solution Learning Centre

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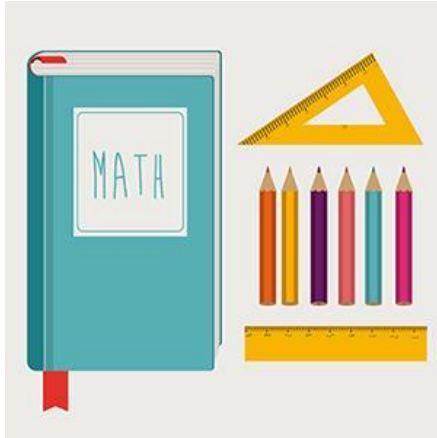
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