

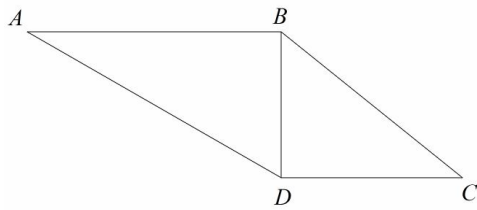
Problem Solving GCSE

Questions10

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(1) Sam scored 37 out of 53 in a test.
Jim scored 67 out of 96 in a test.
Who had the highest proportion of correct answers?

(2) The diagram below shows the quadrilateral $ABCD$.



$$AB = 7$$

$$BC = \sqrt{41}$$

$$CD = 5$$

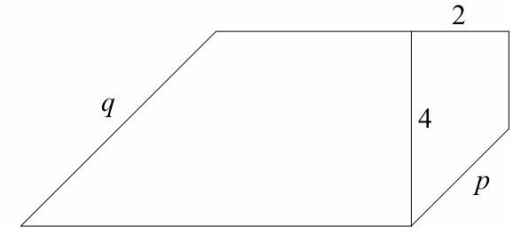
BD is perpendicular to AB and DC .

Find the size of Angle BAD .

(3) It takes 8 men 16 days to build a wall.

4 men work at the same rate and get paid £120 for each day they work.
Find the total cost of hiring the 4 men to complete the job.

(4) The diagram below shows two similar trapeziums.

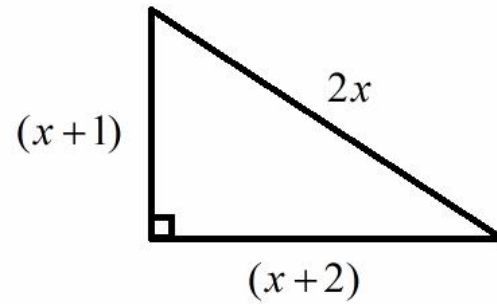


Express p in terms of q .

(5) Complete the table below.

Age	Frequency	Cumulative Frequency	Frequency Density
0-10	6		
		14	
20-30		20	
			2
50-60	8		

(6) The triangle in the diagram below has side lengths $2x$, $(x+2)$ and $(x+1)$.



Show that $2x^2 - 6x - 5 = 0$.

(7) Find the area of a circle with a circumference of $8\pi cm$,
Give your answer in terms of π .

(8) The bearing of Town B from Town A is $(2x-10)^\circ$.

The bearing of Town A from Town B is $(7x-30)^\circ$.

Find the value of x .