SIMILAR SHAPES (LENGTH)

Pearson Edexcel - Tuesday 21 May 2019 - Paper 1 (Non-Calculator) Foundation Tier

1.

28	8.5	P1	for process to use the area of *PQRS* to find the length of *PQ*, eg $10y = 45$ **or** $45 \div 10 \ (= 4.5)$	Sets up equation for area
		P1	for process to use the perimeter of *ABCD*, eg $2x + 2 \times "4.5" = 26$ **or** $26 - 2 \times "4.5" \ (= 17)$ **or** $26 \div 2 \ (= 13)$	Uses perimeter of *ABCD*
		P1	for process to use length of *BC* to find length of *AB*, eg solves $2x + 2 \times "4.5" = 26$ **or** $(26 - 2 \times "4.5") \div 2$ **or** $"13" - "4.5"$	
		A1	for 8.5 **or** $8\frac{1}{2}$	Accept $\frac{17}{2}$

Pearson Edexcel - Tuesday 6 November 2018 - Paper 1 (Non-Calculator) Foundation Tier

2.

16	No and explanation	C1	'No' and explanation with reference to multiplication or division eg No he's incorrect as you would multiply the sides by a number rather than add	

Pearson Edexcel - Tuesday 12 June 2018 - Paper 3 (Calculator) Foundation Tier

3.

27	(a)	9.6	M1	for a correct ratio, eg $\frac{12.6}{8.4} \ (= 1.5)$ **or** $\frac{8.4}{12.6} \ (= 0.66..)$ **or** $\frac{6.4}{8.4} \ (= 0.76..)$ **or** $\frac{8.4}{6.4} \ (= 1.31)$ oe	Decimal equivalents can be truncated or rounded to 2 dp Accept equivalent methods to use a sf eg $\frac{6.4}{2} + 6.4$ (indicative of 1.5)
			A1	cao	
	(b)	10	M1	for $15 \div "1.5"$ **or** $15 \times "0.66.."$ or ft their ratio from part (a) oe	Award the method mark for any (equivalent) complete method shown.
			A1	cao	

Pearson Edexcel – Specimen 2 - Paper 2 (Calculator) Foundation Tier

4.

9			No + explanation	C1	No, with explanation, eg the angle will still be 25°

OCR Tuesday 11 June 2019 – Morning (Calculator) Foundation Tier

5.

25			Two correct corresponding ratios evaluated correctly eg $\frac{6}{10}=0.6$ and $\frac{11}{15}=0.7[...]$ or	M2	M1 for one correct ratio evaluated	$\frac{11}{6}=1.8[...]$ and $\frac{15}{10}=1.5$ $\frac{6}{11}=0.5[...]$ and $\frac{10}{15}=0.6$ to 0.7 $\frac{10}{6}=1.6$ to 1.7 and $\frac{15}{11}=1.3$ to 1.4 Note. Ratios between 6 and 10 and between 15 and 11 may be seen as tangents. These give angles in left triangle of 30.9 to 31.0 or 59.0 to 59.1 and angles in right triangle of 36.2 to 36.3 or 53.7 to 53.8
			A side calculated correctly using one ratio or scale factor and the other side			$(\frac{15}{10}\times 6$ or $\frac{6}{10}\times 15)=9$ $(\frac{10}{15}\times 11$ or $\frac{11}{15}\times 10)=7.3[...]$ $\frac{11}{6}\times 10=18.3[...]$ or $\frac{6}{11}\times 15=8.1$ to 8.2
			No + the [corresponding] ratios or sides are not the same oe or No + the 11 should be 9 oe	A1dep	Dep on M2	A0 for "the sides are 5 cm longer"

OCR Thursday 7 June 2018 – Morning (Non Calculator) Foundation Tier

6.

20	a		3.5 oe	3	M1 for 21 ÷ (15 ÷ 5) soi and M1 for *their 7* ÷ (8 ÷ 4) oe Or M1 for 8 × (15 ÷ 5) soi and M1 for 21 ÷ (*their '24'* ÷ 4) oe Or M1 4 x (5 ÷ 8) soi and M1 for their 2.5 x (21÷ 15) Or B1 scale factor from small triangle to the large triangle is 6 soi	Accept 7 correctly placed on the diagram Accept 24 correctly placed on the diagram Accept 2.5 correctly placed on the diagram Eg may be x2 then x3 correctly shown on diagram
	b		10.5 or 10½ or $\frac{21}{2}$	3	M1 for $\frac{OD}{14}=\frac{7}{4}$ oe or 7 : 4 = OD : 14 A1 for OD = $\frac{49}{2}$ oe	Eg 14 x 1.75

OCR Sample Question Paper 3 – Morning/Afternoon (Calculator) Foundation Tier

7.

15	(a)	Angles at B and D are right angles	1		
		Angles ACB and ECD are vertically opposite **oe**	1		
		Three equal angles (angle sum of a triangle), hence triangles are similar **oe**	1 2 AO1.3b 1 AO2.4a		
	(b)	10.5	2 2 AO1.3a	**M1** for 3.5 × 3 **oe**	

AQA Monday 8 June 2020 – Morning (Calculator) Foundation Tier

8.

Q	Answer	Mark	Comments
26	$\frac{16}{20}$ or $\frac{20}{16}$ or $\frac{12}{20}$ or $\frac{20}{12}$ or 12 : 9.6 or 9.6 : 12 or 16 : 9.6 or 9.6 : 16	M1	oe eg 16 ÷ 20 eg $\frac{4}{5}$ or $\frac{5}{4}$ or $\frac{3}{5}$ or $\frac{5}{3}$ eg 0.8 or 1.25 or 0.6 or 1.66... or 1.67
	9.6	A1	oe

Additional Guidance	
Award M1 work even if not subsequently used	
Ignore further working in an attempt to round after answer 9.6 eg 9.6 in working with answer 10	M1A1
12 × 20 ÷ 16	M1

AQA Thursday 24 May 2018 – Morning (Non-Calculator) Foundation Tier

9.

	C	B1	
4	Additional Guidance		

AQA Tuesday 12 June 2018 – Morning (Calculator) Foundation Tier

10.

25	54	B1	May be on diagram
	7.5 6	B2	May be on diagram B1 for 1 correct or for answers transposed
	Additional Guidance		
	If answers are in wrong position on answer lines, check working and diagram for clear indication of possible transcription errors		
	eg $w = 9 \div 1.5 = 6$ in working, 9 on answer line		B1
	$9 \div 1.5 = 6$ in working, 9 on answer line		B0
	Answer line takes precedence over diagram eg $x = 54$ on diagram and $x = 81$ on answer line		B0

AQA Tuesday 13 June 2017 Morning– Morning (Calculator) Foundation Tier

11.

16(a)	$6 \div 3$ or 2 or $9 \div 2$ or $3 \div 6$ or 0.5 or 9×0.5 or $9 \div 6$ or 1.5 or 3×1.5 or $6 \div 9$ or $\dfrac{2}{3}$ or $3 \div \dfrac{2}{3}$	M1	oe
	4.5	A1	oe
	Additional Guidance		
	Accept embedded answer $4.5 \times 2 = 9$		M1A1
	Ignore further working in attempt to round after answer 4.5 eg $9 \div 2 = 4.5$ with answer 5		M1A1
	'The length is double' without further working		M1A0
	'The triangle is double' without further working		M0A0

16(b)	53	B1	