

6	$0.85 \times x^2 = 1.0285$ or $85 \times x^2 = 102.85$ oe or $(x^2 =) 1.0285 \div 0.85$ or $(x^2 =) 102.85 \div 85$ oe or 1.21 oe		4	M2	for a correct equation using their chosen letter or value in place of letter, or a correct division or 1.21 seen otherwise: (M1 for either 0.85 or 1.0285 seen)
	$(x =) \sqrt{1.0285 \div 0.85}$ or $(x =) \sqrt{102.85 \div 85}$ oe or $(x =) 1.1(0)$			M1	for a correct expression or value for x
		10		A1	
Total 4 marks					

Alternative Mark Scheme for Q6

6	$\left(\frac{100+y}{100}\right)^2 \times 0.85 = 1.0285$ oe or $\left(\frac{100+y}{100}\right)^2 = 1.21$ oe or $10^4 + 200y + y^2 = 12100$ oe		4	M2	for a correct equation using their chosen letter, otherwise: (M1 for either 0.85 or 1.0285 seen)
	$\frac{100+y}{100} = 1.1$ or $100 + y = 110$ oe or $(y + 210)(y - 10) = 0$			M1	for a correct equation involving y with no square terms or a correct method for solving the quadratic: If factorising, allow brackets which expanded give 2 out of 3 terms correct – if using formula or completing the square allow one sign error and some simplification – allow as far as eg $\frac{-200 \pm \sqrt{40000 + 8400}}{2}$ or eg $(y + 100)^2 - 12100 = 0$ oe
		10		A1	
Total 4 marks					

7	e.g. 0.7×20160 oe (= 14112) or 0.3×20160 oe (= 6048)		4	M1	
	e.g. “14112” $\div (9 + 5 + 2)$ (= 882) or $(20160 - “6048”) \div (9 + 5 + 2)$ (= 882)			M1	M2 for $\frac{9-2}{9+5+2} \times “14112”$ oe
	e.g. $9 \times “882” - 2 \times “882”$			M1	
		6174		A1	
Total 4 marks					

8	9, 18, 27, 36 and 12, 24, 36 or 36 or a multiple of 36 or (9 × 12 =) 108 or 3 ² × 4 (= 36) (from Venn diagram or table)		4	M1 for at least two multiples of 9 and 12 or 36 or a multiple of 36																					
	“4” × 7.6(0) or “3” × 4.8(0) or “30.4” or “14.4” or “4n” × 7.6(0) or “3n” × 4.8(0)			M1 for a correct method to find the cost of 4 or 8 or 12 etc of packets of pens or 3 or 6 or 9 etc packets of pencils																					
	“4” × 7.6(0) + “3” × 4.8(0) or “30.4” + “14.4” or “4n” × 7.6(0) + “3n” × 4.8(0)			M1 for a correct combination of number of packets of pens × 7.6(0) + number of packets of pencils × 4.8(0) with an intention to add eg <table><tr><td>pens</td><td>pencils</td><td></td></tr><tr><td>4 × 7.60 +</td><td>3 × 4.8 =</td><td>44.8(0)</td></tr><tr><td>8 × 7.60 +</td><td>6 × 4.8 =</td><td>89.6(0)</td></tr><tr><td>12 × 7.60 +</td><td>9 × 4.8 =</td><td>134.4(0)</td></tr><tr><td>16 × 7.60 +</td><td>12 × 4.8 =</td><td>179.2(0)</td></tr><tr><td>36 × 7.60 +</td><td>27 × 4.8 =</td><td>403.2(0)</td></tr><tr><td>48 × 7.60 +</td><td>36 × 4.8 =</td><td>537.6(0)</td></tr></table>	pens	pencils		4 × 7.60 +	3 × 4.8 =	44.8(0)	8 × 7.60 +	6 × 4.8 =	89.6(0)	12 × 7.60 +	9 × 4.8 =	134.4(0)	16 × 7.60 +	12 × 4.8 =	179.2(0)	36 × 7.60 +	27 × 4.8 =	403.2(0)	48 × 7.60 +	36 × 4.8 =	537.6(0)
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	<i>Correct answer scores full marks (unless from obvious incorrect working)</i>	44.8(0)		A1 allow 45 if 44.8(0) seen allow 4480 p or pence if £ sign crossed out M3A0 for 44.8 <i>n</i> where <i>n</i> is an integer (eg 134.4(0))																					
				Total 4 marks																					