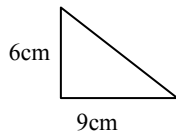


	Give one mark for each •	Illustrations for awarding each mark																											
<p>1(a) ans: £6110</p> <ul style="list-style-type: none"> •¹ calculate discount •² deduct discount <p>(b) ans: she is wrong; bank more expensive</p> <ul style="list-style-type: none"> •¹ calculate bank cost •² know how to calculate HP cost •³ calculations correct •⁴ correct conclusion 		<ul style="list-style-type: none"> •¹ $0.06 \times 6500 = \text{£}390$ •² $\text{£}6500 - 390 = \text{£}6110$ <p style="text-align: right;">2 marks KU</p> <ul style="list-style-type: none"> •¹ $36 \times 215 = \text{£}7740$ •² $0.15 \times 6500 = \text{£}975$ •³ $\text{£}975 + (24 \times 265) = \text{£}7335$ •⁴ No. She is wrong as bank is £405 more expensive. <p style="text-align: right;">4 marks RE</p>																											
<p>2(a) ans: $8x - 6$</p> <ul style="list-style-type: none"> •¹ break bracket •² collect like terms <p>(b) ans: $4(2p - 5)$</p> <ul style="list-style-type: none"> •¹ correct common factor •² bracket 		<ul style="list-style-type: none"> •¹ $8x - 20 + 14$ •² $8x - 6$ <p style="text-align: right;">2 marks KU</p> <ul style="list-style-type: none"> •¹ 4 •² $4(2p - 5)$ <p style="text-align: right;">2 marks KU</p>																											
<p>3(a) ans: table completed</p> <ul style="list-style-type: none"> •¹ correct strategy •² attempts to complete table •³ correctly completes table <p>(b) ans: $\frac{3}{8}$</p> <ul style="list-style-type: none"> •² state probability 		<ul style="list-style-type: none"> •¹ any 3 correct columns •² any 3 more correct columns •³ correct final column <table border="1" style="width: 100%; text-align: center;"> <tbody> <tr> <td>1</td><td>T</td><td>T</td><td>T</td><td>T</td><td>H</td><td>H</td><td>H</td><td>H</td> </tr> <tr> <td>2</td><td>T</td><td>T</td><td>H</td><td>H</td><td>T</td><td>H</td><td>T</td><td>H</td> </tr> <tr> <td>3</td><td>T</td><td>H</td><td>T</td><td>H</td><td>T</td><td>T</td><td>H</td><td>H</td> </tr> </tbody> </table> <p style="text-align: right;">3 marks RE</p> <ul style="list-style-type: none"> •² $\frac{3}{8}$ <p style="text-align: right;">1 mark KU</p>	1	T	T	T	T	H	H	H	H	2	T	T	H	H	T	H	T	H	3	T	H	T	H	T	T	H	H
1	T	T	T	T	H	H	H	H																					
2	T	T	H	H	T	H	T	H																					
3	T	H	T	H	T	T	H	H																					

	Give one mark for each •	Illustrations for awarding each mark
4(a)	ans: 15 minutes <ul style="list-style-type: none"> •¹ answer 	<ul style="list-style-type: none"> •¹ 15 minutes <p style="text-align: right;">1 mark KU</p>
(b)	ans: 51km/h <ul style="list-style-type: none"> •¹ finds correct distance •² converts time to hours •³ correct strategy •⁴ round answer 	<ul style="list-style-type: none"> •¹ $d = 12.7\text{km}$ •² $15\text{mins} = 0.25\text{h}$ •³ $s = \frac{12.7}{0.25}$ •⁴ $50.8 = 51\text{km/h}$ [nearest km/h] <p style="text-align: right;">4 marks KU</p>
5(a)	ans: 14.2 <ul style="list-style-type: none"> •¹ know to use Pythagoras Theorem •² evaluates to square root •² calculate hypotenuse and rounds to 1dp 	<ul style="list-style-type: none"> •¹ $2.5^2 + 14^2$ •² $\sqrt{202.25}$ •² 14.2 <p style="text-align: right;">3 marks KU</p>
(b)	ans: not enough with reason <ul style="list-style-type: none"> •¹ find area of covering •² correctly calculate cost of covering •³ correct conclusion 	<ul style="list-style-type: none"> •¹ $14.2 \times 5 = 71\text{m}^2$ •² $\text{£}79.95 \times 71 = \text{£}5676.45$ •³ No. They are $\text{£}176.45$ short. <p style="text-align: right;">3 marks RE</p>
6	ans: 56° <ul style="list-style-type: none"> •¹ identifies right angled triangle •² correct strategy (SOHCAHTOA) •³ calculations correct •⁴ round answer 	<ul style="list-style-type: none"> •  • $\tan \bullet = \frac{9}{6}$ • $\bullet = \tan^{-1} \frac{9}{6} = 56.3^\circ$ • 56° <p style="text-align: right;">4 marks RE</p>

	Give one mark for each •	Illustrations for awarding each mark														
7(a)	<p>ans: $1\,583\text{cm}^3$</p> <ul style="list-style-type: none"> •¹ subs values into formula •² calculations correct 	<ul style="list-style-type: none"> •¹ $V = \pi \times 6^2 \times 14$ •² 1583cm^3 <p style="text-align: right;">2 marks KU</p>														
(b)	<p>ans: 433cm^3</p> <ul style="list-style-type: none"> •¹ correct strategy •² identify dimensions of box •³ calculate volume of box •⁴ calculate difference in volume 	<ul style="list-style-type: none"> •¹ $V(\text{box}) - V(\text{cylinder})$ •² $l = 12\text{cm}, b = 12\text{cm}, h = 14\text{cm}$ •³ $V(\text{box}) = 12 \times 12 \times 14 = 2\,016\text{cm}^3$ •⁴ $2\,016 - 1\,583 = 433\text{cm}^3$ <p style="text-align: right;">4 marks RE</p>														
8(a)	<ul style="list-style-type: none"> •¹ correct 2 entries •² correct last entry 	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>b</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td style="background-color: #cccccc;"></td> <td>8</td> </tr> <tr> <td>l</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td style="background-color: #cccccc;"></td> <td>18</td> </tr> </table> <p style="text-align: right;">2 marks RE</p>	b	1	2	3	4		8	l	4	6	8	10		18
b	1	2	3	4		8										
l	4	6	8	10		18										
(b)	<p>ans: $l = 2b + 2$</p> <ul style="list-style-type: none"> •¹ correct multiplier •² complete formula 	<ul style="list-style-type: none"> •¹ $l = 2b$ •² $l = 2b + 2$ <p style="text-align: right;">2 marks RE</p>														
(c)	<ul style="list-style-type: none"> •¹ correct strategy •² solve equation 	<ul style="list-style-type: none"> •¹ $2b + 2 = 24$ •² $b = 11$ <p style="text-align: right;">2 marks RE</p>														
9(a)	<ul style="list-style-type: none"> • realises to use radius • substitutes correctly into formula • correct area • rounds correctly to one decimal place 	<ul style="list-style-type: none"> •¹ Radius = 24 or 24^2 •² $\text{Area} = \pi r^2 = \pi \times 24^2$ •³ Area = 1808.64 •⁴ Area = 1808.6 cm^2 <p style="text-align: right;">4 marks KU</p>														
(b)	<ul style="list-style-type: none"> • knows to find area of card • calculates area of card • calculates difference 	<ul style="list-style-type: none"> •¹ Area of card = 48^2 •² 2304cm^2 •³ wastage = $2304 - 1810 = 494\text{cm}^2$ <p style="text-align: right;">3 marks RE</p>														

Total Marks: KU 21 RE 27
Paper Totals : KU 42 RE 40