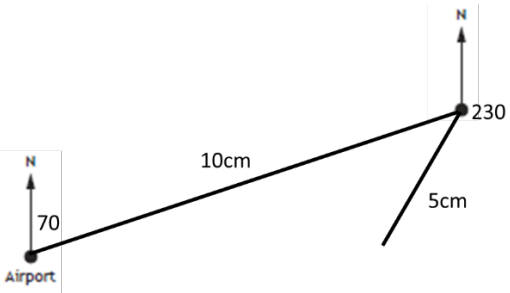




Question	Give 1 mark for each •	Illustrations of evidence
1.	<p>Ans: Mean = 22/5, SD = 5.39, Valid Comparison</p> <ul style="list-style-type: none"> • Calculate the mean • The sum of x and x^2 • Subs into formula • Calculate standard deviation • Compare averages • Compare SD 	<ul style="list-style-type: none"> • 22.5 • $x = 135$ and $x^2 = 3183$ • Check formula • $SD = 5.39$ • The average prices in the shops were the same • The prices in the second shop varied less
2a	<p>Ans: 15cm and 7cm</p> <ul style="list-style-type: none"> • Uses ratio • Dimensions calculated. 	<ul style="list-style-type: none"> • $\div 7 \times 3$ • 15 and 7
2b	<p>Ans: 9.2%, so yes it does</p> <ul style="list-style-type: none"> • Area of a triangle • Find the radius • Find the area of the circle • Find the percentage • Answer with justification. 	<ul style="list-style-type: none"> • 67.5 • $r = 13.5$ • 572 • 11.8% • Yes because 9% is between 7 and 12%.
3a	<p>Ans: £218020.50</p> <ul style="list-style-type: none"> • Find multiplier 	<ul style="list-style-type: none"> • $340 \times 4 = £1360$

	<ul style="list-style-type: none"> • State multiplication • Calculate after 2 years • State new multiplication • State final value 	<ul style="list-style-type: none"> • 250000×0.97^2 • 235225 • 235225×0.975^3 • £218020.50
3b	Ans: 8% <ul style="list-style-type: none"> • Find loss • Calculate percentage 	<ul style="list-style-type: none"> • $£250000 - 230000 = 20000$ • $20000/250000 \times 100 = 8\%$
4a	Ans: £4306.80 <ul style="list-style-type: none"> • Calculate the 2% • Calculate the 12% • Add together 	<ul style="list-style-type: none"> • 2% of 9420 = £188.40 • 12% of 42380 = 4118.40 • 4306.8
4b.	Ans: £3111.06 <ul style="list-style-type: none"> • Find 5% of their wage • Find total monthly deductions • Calculate the take home pay 	<ul style="list-style-type: none"> • 2590 • $(2590 + 7570.5 + 4306.8) \div 12 = 1205.61$ • $51800 \div 12 - 1205.61 = 3111.06$
5a.	Ans: 480000cm³ <ul style="list-style-type: none"> • Substitute into formula • Calculate volume 	<ul style="list-style-type: none"> • $60 \times 20 \times 40$ • 48000cm³
5b.	Ans: 7.96cm <ul style="list-style-type: none"> • Calculate the volume of one cylinder • Substitute into formula • Find height of cylinder 	<ul style="list-style-type: none"> • $480000 \div 120 = 400$ • $400 = \pi \times 4^2 \times h$ • $h = 7.96\text{cm}$
6.	Ans: P = 29/35 <ul style="list-style-type: none"> • Calculate the total probabilities 	<ul style="list-style-type: none"> • $5 \times 7 = 35$

	<ul style="list-style-type: none"> • Calculate probability that wins • Calculate probability that doesn't wins 	<ul style="list-style-type: none"> • 6/35 • 29/35
7.	<p>Ans: 137.5 miles</p> <ul style="list-style-type: none"> • Plot 3 points • Final 3 points • Line of best fit • Use line to predict • Predict speed using line • calculate time • use formula • calculate distance 	<ul style="list-style-type: none"> • 3 correct. • Final 3 correct. • appropriate line drawn. • Approx 36±4mph • 110 approx • $t = 1.25$ • 100×1.25 • $D = 137.5$ miles
8a.	<p>Ans: £1334</p> <ul style="list-style-type: none"> • Find 12% of 1200 • Add up wages 	<ul style="list-style-type: none"> • 144 • 1344
8b.	<p>Ans: £958.08</p> <ul style="list-style-type: none"> • Find 18% • Take away from total 	<ul style="list-style-type: none"> • 241.92 • 958.08
8c.	<p>Ans: £276.08</p> <ul style="list-style-type: none"> • Calculate total deductions • $958.08 - 682$ 	<ul style="list-style-type: none"> • £682 • $958.08 - 682 = 276.08$
8d.	<p>Ans: Family Pass £70</p> <ul style="list-style-type: none"> • Calculate how much he saves a week 	<ul style="list-style-type: none"> • $276.08 \div 2 = 138.04$

	<ul style="list-style-type: none"> • Calculate 1 company's monthly instalments • Calculate other company's monthly instalments (don't need them all) • State which the best option is 	<ul style="list-style-type: none"> • 12 month = 269.58 • 24 month, 141.66; 36 month, 102.5; 48 month, 79.16 • The 36 month option is the best for gary because it is the the fastest option to pay off the kitchen that stays within his budget,
<p>9.</p>	<p>Ans: Scale Drawing</p>  <ul style="list-style-type: none"> • Correct first bearing • 10cm line calculated and drawn • second bearing correct • 5cm line calculated and drawn • Correct length in cm • converted using scale • Bearing calculation attempt on graph • Correct bearing 	<ul style="list-style-type: none"> • Diagram • Diagram • Diagram • Diagram • 5.5 • 110 miles • Diagram • 271