

National 5 Lifeskills Mathematics

Non- Calculator

Question	Marking Scheme	Evidence
1.	ANS :80.44 <ul style="list-style-type: none"> • Know to multiply first • Complete calculation 	<ul style="list-style-type: none"> • $3.72 \times 20 = 74.4$ • $74.4 + 6.04 = 80.44$
2.	ANS : $1\frac{9}{10}$ <ul style="list-style-type: none"> • Start to divide fractions • Multiply fractions and simplify 	<ul style="list-style-type: none"> • $\frac{19}{6} \times \frac{3}{5}$ • $\frac{57}{30} = 1\frac{9}{10}$
3.	ANS :250 males <ul style="list-style-type: none"> • Know to divide by 8 • Know to multiply by 5 	<ul style="list-style-type: none"> • $400/8 = 50$ • $50 \times 5 = 250$
4.	ANS :yes, 94cm > 80cm <ul style="list-style-type: none"> • Calculate scale factor • Know how to find length • Calculate length • Conclusion with justification 	<ul style="list-style-type: none"> • $75/40 = 1.875$ • 1.875×48 • 94 • Yes because 94cm > 80cm
5.	ANS :2cm <ul style="list-style-type: none"> • Identify radius • Know to use Pythagoras • Complete Pythagoras • Calculate depth 	<ul style="list-style-type: none"> • 5cm • $5^2 - 4^2$ • 3 • $5 - 3 = 2\text{cm}$

Calculator

1.	ANS : £684.70 <ul style="list-style-type: none"> • Know to increase by 4.5% • Calculate value • Round to nearest penny 	<ul style="list-style-type: none"> • 1.045 • $600 \times 1.045 = 684.699\dots$ • £684.70
2.(a)	ANS : mean 24, S.d 7 <ul style="list-style-type: none"> • Know how to calculate mean • Calculate $(x - \bar{x})^2$ • Substitute into formula • Calculate standard deviation 	<ul style="list-style-type: none"> • $(28 + 32 + 14 + 19 + 18 + 26 + 31)/7 = 24$ • 16,64,100,25,36,4,49 • $\sqrt{294/7}$ • 7
(b)	ANS : two valid statements <ul style="list-style-type: none"> • Statement about mean • Statement about s.d 	<ul style="list-style-type: none"> • On average more visited Erin's table (higher mean) • S.d for Erin was lower so number of birds each day is more consistent
3.	ANS : £135 <ul style="list-style-type: none"> • Know what % total bill is of price of 	<ul style="list-style-type: none"> • 110

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	meal <ul style="list-style-type: none"> • Know how to calculate price of meal • Calculate price of meal 	<ul style="list-style-type: none"> • $148.5/110 \times 100$ • £135
4.	ANS : 384g <ul style="list-style-type: none"> • Calculate weight of 1 part • Calculate weight of gold used • Calculate total weight 	<ul style="list-style-type: none"> • $160 / 5 = 35$ • $35 \times 7 = 224$ • $160 + 224 = 384g$
5.	ANS :55.85 cm ² <ul style="list-style-type: none"> • Know to find angle of sector • Find area of sector • Find total area of blades 	<ul style="list-style-type: none"> • $64/360$ or equivalent • $\pi \times 5^2 \times 64/360$ • $4 \times 13.96... = 55.85\text{cm}^2$
6.(a)	ANS :113.1 cm ³ <ul style="list-style-type: none"> • Substitute values correctly • Calculate volume 	<ul style="list-style-type: none"> • $\pi \times 3^2 \times 4$ • 113.1 cm³
(b)	ANS :3.78cm <ul style="list-style-type: none"> • Substitute values correctly • Start to evaluate • Complete evaluation for r 	<ul style="list-style-type: none"> • $113.1 = \frac{2}{3} \times \pi \times r^3$ • $r^3 = 113.1 / \pi \times (3/2)$ • $r = \sqrt[3]{54} = 3.78 \text{ cm}$