S2 Level 4 Non Calculator Practice

1. Calculate:

(a) $16 + 2 \times (5 - 3)$ (b) $(3 + 2)^2 - 18 \div 6$

(c) $(-7) \times (-2) \times 3$ (d) $\frac{14 \times 3}{-6}$ — 4

2. Simplify

(a) $3r - 5r + (-8r)$ (b) $2(7r) - {}^{-}5r$ — 2

3. State the number of significant figures in

(a) 705500 (b) 0.00150 — 2

Round the following to 2 significant figures

(c) 0.001095 (d) 1519705831 — 2

4. Last year the UK government spent approximately £108 750 216 100 on education.

(a) Round this answer to 2 significant figures — 1

(b) If there are approximately 10 million school age children in the UK at this time. How much is each child's share? — 1

5. A coin is tossed and a die thrown.

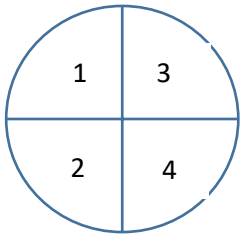
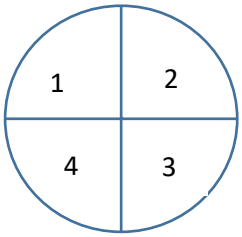
Complete this table to show all the possible results:

	1	2	3	4	5	6
Heads(H)		2H				
Tails(T)				4T		

— 2

What is the probability of getting:

(a) Heads and an even number? **(b)** Tails and a prime number? — 2

6.	In a large tin of roses the probability of getting a hazelnut whirl is 15% If there are 6 hazelnut whirls in a tin, how many sweets are in the tin?	 2
7.	A game of chance at a school fair involves two spinners as shown below   Complete the table to show all possible outcomes from spinning both circles at the same time 1,1 | 2,1 | 3,1 | 1,2 | | | | | | | | | What is the probability of achieving (a) a double (b) a total of 7	 2 2
	22 marks	

S2 Level 4 Calculator Practice

1. Jamie's basic rate of pay is £9.24 per hour. If he works any overtime he is paid at time and a half.

If Jamie works a basic 50 hour week and usually works 3 hours of overtime during the weekend. Calculate

(a) His weekly wage — 3
(b) His annual wages — 1

Shown below is part of his year-end wage slip.
Fill in any gaps and calculate his net pay

Jamie McKenna	Annual wage summary April 2017
Annual Wages _____	Deductions National Insurance £ 1346.30 Income Tax 2134.52 Pension 1207.55
Gross Pay _____	Total Deductions _____
	Net Pay _____

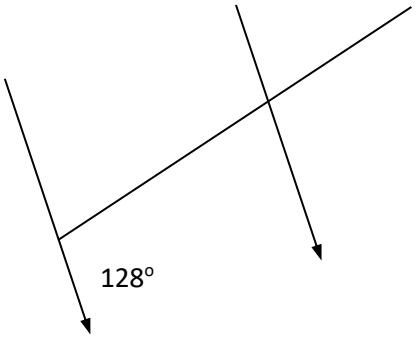
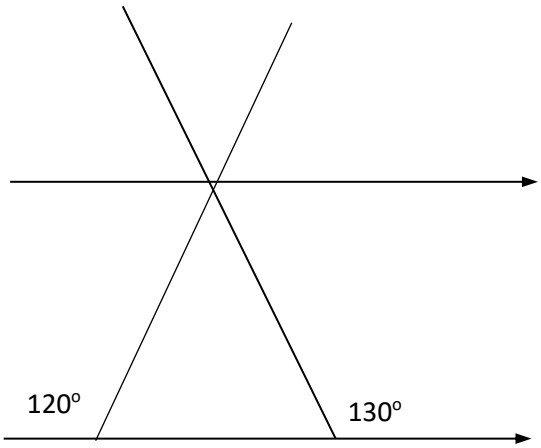
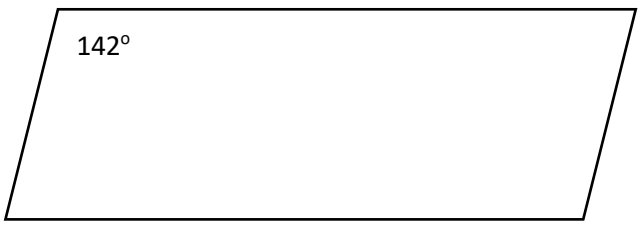
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2. Jenna is considering buying a new ford Ka from two different garages. The cash price for the car is £6990.

Each garage is offering a slightly different deal

Betta Cars - New Ford Ka	Cars 4U - New Ford Ka
Initial payment of £1900	Initial payment of 15% cash price
36 equal payments of £180.50	30 equal payments of £220.00

(a) Which garage offers the "best" deal for Jenna — 5
(b) If she chooses to buy her car using this deal, how much extra will she pay — 1

3.	Calculate the average speed taken to travel 150 miles in 1 hour and 15 minutes	3
4.	The speed of sound is 340 metres per second. (a) If Ethan shouts to Angus who is standing 1700 metres away, how many seconds does it take for the sound to reach him? (b) What is the speed of sound in (i) metres per hour (ii) Km per hour	3 2
5	Mark **all** the missing angles in these diagrams    	3 5 2
	33 marks	