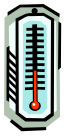
Answers	Date:	Pre GCSE Maths 2004/5 November half term assessment

Curriculum link	**N1 (Whole Numbers)**		**Marks**
N1/L1.1 Read, write, order and compare numbers, including large numbers (a) understand that the position of a digit signifies its value (b) know what each digit represents in a number up to 7 digits, including the use of zero as a place holder (c) understand the symbols for greater than, less than (see also page 2) N1/L2.1 Read, write, order and compare **positive** and negative numbers of any size in a practical context (a) understand that the position of a digit signifies its value (b) know what each digit in a number represents, including the use of zero as a place holder (c) see page 2	▸▸ Put these numbers in descending order **20100, 210101, 210010, 200001.** **210101, 210010, 200001, 20100.**		1
	▸▸ Susan has bought a new car. It cost £21 091. Write this in words in the cheque below. **Date:** *17-10-02* **Pay:** *Smart Cars Ltd* *Twenty one thousand and ninety one pounds (only).* **£** *21,091-00* Mrs S J Johnson *S J Johnson*		1
	▸▸ Martin won one million, thirty thousand, five hundred and fifty six pounds on the lottery. Write this amount in figures below. £ 1,030, 556		**1**
	▸▸ Write the correct symbol (**<** or **>**) between these pairs of numbers: **64092 > 64009** **5215 < 5351**		½ ½
	▸▸ What does the digit **5** represent in these two numbers: **1 500 867** **500 000 (five hundred thousand/s)** **2567** **500 (five hundred/s)**		½ ½
Tutor's comments:			5

Curriculum link	N1 (Whole Numbers)		Marks
N1/L1.2 Recognise negative numbers in practical contexts (a) understand the words positive and negative (b) know that 0°C is the temperature at which water freezes. (c) understand that a negative temperature is below zero N1/L2.1 Read, write, order and compare positive and **negative** numbers of any size in a practical context (c) understand the meaning of negative numbers in a practical context, e.g. temperature below zero, loss in trading **Also:** Add, subtract and multiply negative numbers.	▸▸ Re-write these numbers in **ascending** order **202 -201 -2 -21 25** -201 -21 -2 25 202 ▸▸ Circle the **smallest** number **1, -2, -25, 9, 7, -26**		1 1
	▸▸ Mike is £20 overdrawn. He pays in a cheque for £35. **What is his new balance? £15** 		1
	▸▸ The temperature in Glasgow is 7° C. During the night the temperature drops 9° C. **What is the new temperature? -2°C**  ▸▸ The temperature at midnight was -6° C. By 9am the next morning, it was 2° C. **By how many degrees has the temperature risen? 8°C**		1 1
	▸▸ Answer the following questions: **-5 + 6 = 1** **5 - 6 = -1** **-5 x 6 = -30** **-5 x -6 = 30** **-7 - -6 = -1** **9 - -6 = 15**		1 1 1 1 1 1
	▸▸ Write the correct symbol (< or >) between these pairs of numbers: **-4 < 8** **-8 < -4**		½ ½
Tutor's comments:			12

Curriculum link	N1 (Whole Numbers)		Marks
N1/L1.3 Add, subtract, multiply and divide using efficient written methods N1/L2.2 Carry out calculations with numbers of any size using efficient methods. (a) see page 5 (b) see page 5 (c) know and use strategies to check answers, e.g. approximate calculations, estimation, (inverse operations).	▸▸ Calculate the following, using any method you wish (except using a calculator): 5 4 2 x 3 7 **2 0 0 5 4** 567 ÷ 9 = **6 3** 1 8 0 7 4 3 9 - **1 3 6 8** 7 1 2 3 6 4 – **3 4 8**		1 1 1 1
	▸▸ A group of 43 people are going to the theatre. They are going by minibus. Each minibus holds 16 people including the driver. a) **How many mini buses do they need?** **3** b) Block bookings of 30+ theatre seats are entitled to special rate of £8 per ticket. **What is the total cost for the group?** **£344** c) Circle the calculation below that could be used **to check** your answer to (b) above. total cost ÷ 16 — **total cost ÷ 8** 30 ÷ 8 — 43 x 8		1 1 1
	▸▸ Mark has saved £213.97 towards his holiday. He has to pay a deposit of £150.50 at the travel agents. He works out that this will leave him £63.47. Which **one** of the following could he use **to check** his answer? £63.47 + £213.97 — **£150.50 + £63.47** £150.50 - £63.47 — £213.97 + £150.50		1
Tutor's comments:			8

Curriculum link	N1 (Whole Numbers)		Marks
N1/L1.4 Multiply and divide whole numbers by 10 and 100. (a) understand place value for **whole** and to two-decimal places. N1/L1.5 Recall multiplication facts up to 10 x 10 and make connections with division facts. N1/L1.6 Recognise numerical relationships (e.g. multiples and squares) (a) recognise multiples of 2 to 9, up to 100 (b) recognise multiples of 10, 50, 100, 1000 (c) know **square numbers** up to 10 x 10 N1/L2.2 Carry out calculations with numbers of any size using efficient methods. (a) understand words **multiple and factor** and relate them to multiplication and division facts (b) understand the word **prime and know prime numbers to 20** (c) see page 4 **Also:** cubes, powers, square roots.	▸▸ Circle all the **prime** numbers in this list: **7** **9** **12** **13** **21**		1
	▸▸ Divide the following numbers by 10 **6700** → **670** **16040** → **1604**		½ ½
	▸▸ Multiply the following numbers by 100 **674** → **67400** **380** → **38000**		½ ½
	▸▸ In the 100 square below a) Lightly shade all the square numbers b) Circle three multiples of seven any three c) Put a line through all the ~~factors of 20~~		1 1
	▸▸ Circle all the **multiples of 50**: **100** **2050** **2105** **3000** **3125**		1
	▸▸ Answer the following 3 questions $\sqrt{36}$ = **6** 2^3 = **8** 4 to the power of 3 equals **64**		1 1 1
Tutor's comments:			13

~~1~~	~~2~~	3	~~4~~	~~5~~	6	7	8	9	~~10~~
11	12	13	14	15	16	17	18	19	~~20~~
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Curriculum link	N1 (Whole Numbers)		Marks
N1/L1.8 Approximate by rounding (a) understand that numbers can be rounded to different degrees of accuracy e.g. to nearest 10, 100, 1000, million N1/L1.9 Estimate answers to calculations (a) know how to make approximate calculations (b) understand that a knowledge of context enables "guessing" at answers (e.g. it should be about ...), or judging if answers are sensible (e.g. that's far too big; it doesn't make sense to have an answer less than 1, etc.) N1/L2.2 Carry out calculations with numbers of any size using efficient methods. (a) see page 5 (b) see page 5 (c) know and use strategies to check answers, e.g. approximate calculations, estimation,(inverse operations). **Also:** round whole numbers to one significant figure	⏩ The latest census suggests that the UK population in 2001 was 58789194. What is the population to the nearest million? **59 000 000 or 59 million**		1
	⏩ Round these numbers to the nearest 10 **6715** **6720** **23602** **23600**		1 1
	⏩ Round these numbers to 1 significant figure **674** **700** **1423** **1000**		1 1
	⏩ Use rounding to 1 significant figure to **estimate** the answers to these questions: $\frac{102 \times 99}{11}$ $\frac{100 \times 100}{10} = 1000$ $\frac{48 \times 99}{52}$ $\frac{50 \times 100}{50} = 100$		1 1
	⏩ Write down a suitable calculation to check each of the following: (For example: To check that 144 ÷ 6 = 24 do 24 x 6 = 144) 167 + 32 = 199 **199-32=167 or 199-167 =32** 2345 - 1234 = 1111 **1111 + 1234 = 2345** 9 x 8 = 72 **72÷8=9 or 72÷9=8**		1 1 1
	⏩ Terry wants to buy ten cases of wine (12 bottles per case) for a party. Each bottle costs £3.98. He estimates that it will cost about £4800. a) **Is his estimate right or wrong?** **Wrong** b) **Explain your answer.** 12 x £4 = £48 per case. £48 x 10 = £480. So his estimate is way out (factor of ten)		1 1
Tutor's comments:			12

Curriculum link	N1 (Whole Numbers)		Marks
N1/L2.4 Evaluate expressions and make substitutions in given formulae in words and symbols to produce results (a) understand that words and symbols in expressions and formulae represent variable quantities (numbers), not things (i.e. 2a + 2b cannot be explained as 2 apples and 2 bananas) (b) understand that the contents of brackets must be worked out first (c) understand that, when there is no operator between a number and a variable, or two variables, multiplication is implied, e.g. 2a = 2 x a; ab = a x b; 2ab = 2 x a x b	▸▸ Write algebraic expressions for Six more than y → **y + 6** (1) p multiplied by p → **p^2** (1) 6 multiplied by z → **6z** (1) Two less than n → **n - 2** (1)		
	▸▸ Collect the like terms together **5p + 6p – y – 2p + 4y = 9p + 3y** (1) **5a – 6b - 2a + 3b = 3a - 3b** (1)		
	▸▸ Solve the following (think BIDMAS) **5 + 6 x 3 = 23** (1) **(5 + 6) x 3 = 33** (1) **20 – 4 ÷ 2 = 18** (1)		
	▸▸ The formula to work out the cooking time for a chicken is: Time (mins) = Weight (lbs) x 25mins + 20mins **How long does it take to cook a 4lb chicken? 4 x 25 + 30 = 120 min (2hrs)** (1)		
	▸▸ A repair company charge a £40 call out fee plus £15 per half hour worked. Martin's washer takes 2 hours to repair. **How much is he charged?** **40 + 4 x 15 = £100** (1)		
	▸▸ If x = 5 and y = 2 Find the value of y (x + 1) **2 (5 + 1) = 12** (1)		
Tutor's comments:		Total Score	62 / 12