

Pre GCSE Maths 2004/5

Assessment 1 - Whole Numbers

This assessment is designed to check your knowledge of the topics we have covered in the first half term (i.e. Chapter 1 and parts of Chapter 2 of the *text book, along with extra worksheets for formulae and substitution).

*Edexcel GCSE Maths Foundation 2001 edition. ISBN 0-435-53269-3

Curriculum links to the adult numeracy curriculum (levels 1 and 2) are shown in the left hand column. All whole number (N1) elements at Level 1 and Level 2 are covered except N1/L1.7, L2.3 (ratio and proportion).

Please read these instructions carefully.

- ▶ You have an hour to attempt as many questions as you can. You may attempt questions in any order.
- ▶ You will need a pen, pencil and eraser. Please write your name on every sheet in pen. You may answer questions in pen or pencil. Calculators are not permitted.
- ▶ Please show all your working on the paper (do not use extra scrap paper).
If you need extra space for working, use the left hand column or the back of any sheet.
- ▶ Do not write in the final two columns of the paper.
- ▶ The marks obtainable for each question are shown on the right hand column. The maximum number of marks is 62.


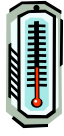
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Date:	Pre GCSE Maths 2004/5 November half term assessment
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Curriculum link	N1 (Whole Numbers)	Marks
<p>N1/L1.1 Read, write, order and compare numbers, including large numbers (a) understand that the 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)</p> <p>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</p>	<p>▶▶ Put these numbers in descending order 20100, 210101, 210010, 200001.</p>	1
	<p>▶▶ Susan has bought a new car. It cost £21 091. Write this in words in the cheque below.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: right;">Date: 17-10-02</p> <p>Pay: <i>Smart Cars Ltd</i></p> <hr style="width: 50%; margin-left: 0;"/> <p style="text-align: right;">£ 21,091-00</p> <hr style="width: 50%; margin-left: 0;"/> <p style="text-align: right;">Mrs S J Johnson <i>S J Johnson</i></p> </div>	1
	<p>▶▶ Martin won one million, thirty thousand, five hundred and fifty six pounds on the lottery. Write this amount in figures below.</p>	1
	<p>▶▶ Write the correct symbol (< or >) between these pairs of numbers:</p> <div style="text-align: center; margin: 5px 0;"> 64092 64009 </div> <div style="text-align: center; margin: 5px 0;"> 5215 5351 </div>	<p>½</p> <p>½</p>
	<p>▶▶ What does the digit 5 represent in these two numbers:</p> <div style="text-align: center; margin: 5px 0;"> 1 500 867 </div> <div style="text-align: center; margin: 5px 0;"> 2567 </div>	<p>½</p> <p>½</p>
Tutor's comments:		5

Name:

Curriculum link	N1 (Whole Numbers)		Marks
<p>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</p> <p>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</p> <p>Also: Add, subtract and multiply negative numbers.</p>	<p>▶▶ Re-write these numbers in ascending order 202 - 201 -2 -21 25</p> <p>▶▶ Circle the smallest number 1, -2, -25, 9, 7, -26</p>		<p>1</p> <p>1</p>
	<p>▶▶ Mike is £20 overdrawn. He pays in a cheque for £35. What is his new balance?</p>		<p>1</p>
	<p>▶▶ The temperature in Glasgow is 7° C. During the night the temperature drops 9° C. What is the new temperature?</p> <p>The temperature at midnight was -6° C. By 9am the next morning, it was 2° C. By how many degrees has the temperature risen?</p>		<p>1</p> <p>1</p>
	<p>▶▶ Answer the following questions:</p> <p>$-5 + 6 =$ $5 - 6 =$</p> <p>$-5 \times 6 =$ $-5 \times -6 =$</p> <p>$-7 - -6 =$ $9 - -6 =$</p>		<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
	<p>▶▶ Write the correct symbol (< or >) between these pairs of numbers:</p> <p style="text-align: center;">-4 8</p> <p>-8 -4</p>		<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
	<p>Tutor's comments:</p>		<p><u>12</u></p>

Name:

Curriculum link	N1 (Whole Numbers)		Marks
<p>N1/L1.3 Add, subtract, multiply and divide using efficient written methods</p> <p>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).</p>	<p>▶▶ Calculate the following, using any method you wish (except using a calculator):</p> $\begin{array}{r} 542 \\ \times 37 \\ \hline \end{array}$ $567 \div 9 =$ $\begin{array}{r} 1807 \\ - 439 \\ \hline \end{array}$ $\begin{array}{r} 712 \\ - 364 \\ \hline \end{array}$		<p>1</p> <p>1</p> <p>1</p> <p>1</p>
	<p>▶▶ A group of 43 people are going to the theatre. They are going by minibus.  Each minibus holds 16 people including the driver.</p> <p>a) How many mini buses do they need?</p> <p>b) Block bookings of 30+ theatre seats are entitled to special rate of £8 per ticket. What is the total cost for the group?</p> <p>c) Circle the calculation below that could be used to check your answer to (b) above.</p> <p>total cost ÷ 16 total cost ÷ 8</p> <p>30 ÷ 8 43 x 8</p>		<p>1</p> <p>1</p> <p>1</p>
	<p>▶▶ 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?</p> <p>£63.47 + £213.97 £150.50 + £63.47</p> <p>£150.50 - £63.47 £213.97 + £150.50</p>		<p>1</p>
	<p>Tutor's comments:</p>		


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<p>N1/L1.4 Multiply and divide whole numbers by 10 and 100. (a) understand place value for whole and to two-decimal places.</p> <p>N1/L1.5 Recall multiplication facts up to 10 x 10 and make connections with division facts.</p> <p>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</p> <p>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</p> <p>Also: cubes, powers, square roots.</p>	<p>▶▶ Circle all the prime numbers in this list:</p> <p style="text-align: center;">7 9 12 13 21</p>		1																																																																																																				
	<p>▶▶ Divide the following numbers by 10</p> <p style="text-align: center;"> 6700 <input style="width: 40px; height: 20px;" type="text"/> 16040 <input style="width: 40px; height: 20px;" type="text"/> </p>		1/2 1/2																																																																																																				
	<p>▶▶ Multiply the following numbers by 100</p> <p style="text-align: center;"> 674 <input style="width: 40px; height: 20px;" type="text"/> 380 <input style="width: 40px; height: 20px;" type="text"/> </p>		1/2 1/2																																																																																																				
	<p>▶▶ In the 100 square below</p> <p style="margin-left: 20px;">a) Lightly shade all the square numbers b) Circle three multiples of seven c) Put a line through all the factors of 20</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> <tr><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td></tr> <tr><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td></tr> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td></tr> <tr><td>71</td><td>72</td><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td></tr> <tr><td>81</td><td>82</td><td>83</td><td>84</td><td>85</td><td>86</td><td>87</td><td>88</td><td>89</td><td>90</td></tr> <tr><td>91</td><td>92</td><td>93</td><td>94</td><td>95</td><td>96</td><td>97</td><td>98</td><td>99</td><td>100</td></tr> </table>	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		1 1 1 1 1 1
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<p>▶▶ Circle all the multiples of 50:</p> <p style="text-align: center;">100 2050 2105 3000 3125</p>		1																																																																																																					
<p>▶▶ Answer the following 3 questions</p> <p style="text-align: center;"> $\sqrt{36} =$ $2^3 =$ 4 to the power of 3 equals ____ </p>		1 1 1																																																																																																					
<p>Tutor's comments:</p>			13																																																																																																				

Name:

Curriculum link	N1 (Whole Numbers)		Marks
<p>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</p> <p>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.)</p> <p>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).</p> <p>Also: round whole numbers to one significant figure</p>	<p>▶▶ The latest census suggests that the UK population in 2001 was 58 789 194. What is the population to the nearest million?</p>		1
	<p>▶▶ Round these numbers to the nearest 10</p> <p style="text-align: center;"> 6715 <input style="width: 40px; height: 20px; margin-left: 10px;" type="text"/> 23602 <input style="width: 40px; height: 20px; margin-left: 10px;" type="text"/> </p>		1 1
	<p>▶▶ Round these numbers to 1 significant figure</p> <p style="text-align: center;"> 674 <input style="width: 40px; height: 20px; margin-left: 10px;" type="text"/> 1423 <input style="width: 40px; height: 20px; margin-left: 10px;" type="text"/> </p>		1 1
	<p>▶▶ Use rounding to 1 significant figure to estimate the answers to these questions:</p> <p style="text-align: center;"> $\frac{102 \times 99}{11}$ $\frac{48 \times 99}{52}$ </p>		1 1
	<p>▶▶ Write down a suitable calculation to check each of the following: (For example: To check that $144 \div 6 = 24$ do $24 \times 6 = 144$)</p> <p style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">167 + 32 = 199</p> <p style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">2345 - 1234 = 1111</p> <p style="text-align: center; border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">9 x 8 = 72</p>		1 1 1
	<p>▶▶ 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.</p> <p>a) Is his estimate right or wrong? b) Explain your answer.</p>		1 1
	<p>Tutor's comments:</p>		

Name:

Curriculum link	N1 (Whole Numbers)		Marks
<p>N1/L2.4 Evaluate expressions and make substitutions in given formulae in words and symbols to produce results</p> <p>(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)</p> <p>(b) understand that the contents of brackets must be worked out first</p> <p>(c) understand that, when there is no operator between a number and a variable, or two variables, multiplication is implied, e.g. $2a = 2 \times a$; $ab = a \times b$; $2ab = 2 \times a \times b$</p>	<p>▶ Write algebraic expressions for</p> <p>Six more than y p multiplied by p</p> <p>6 multiplied by z Two less than n</p>		<p>1</p> <p>1</p> <p>1</p> <p>1</p>
	<p>▶ Collect the like terms together</p> <p>$5p + 6p - y - 2p + 4y =$</p> <p>$5a - 6b - 2a + 3b =$</p>		<p>1</p> <p>1</p>
	<p>▶ Solve the following (think BIDMAS)</p> <p>$5 + 6 \times 3 =$</p> <p>$(5 + 6) \times 3 =$</p> <p>$20 - 4 \div 2 =$</p>		<p>1</p> <p>1</p> <p>1</p>
	<p>▶ The formula to work out the cooking time for a chicken is:</p> <p>Time (mins) = Weight (lbs) x 25mins + 20mins</p> <p>How long does it take to cook a 4lb chicken?</p>		<p>1</p>
	<p>▶ 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?</p> 		<p>1</p>
	<p>▶ If $x = 5$ and $y = 2$ Find the value of $y(x + 1)$</p>		<p>1</p>
	<p>Tutor's comments:</p>	<p>Total Score</p>	<p>62</p>