

abingdon WITNEY college

Name:	Date:	Pre GCSE Maths 2004/5. Homework 2. Efficient written methods and checking with inverse operations.
-------	-------	--

For each question (except Q10) use a written method of your choice.

Please **DO NOT use a calculator.** You **must show** all your working. Use the shaded left hand column or a separate sheet if you need more room for your working.

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. (c) know and use strategies to check answers, e.g. approximate calculations, estimation, (inverse operations).	1. Find the sum of 104 456 and 3406	1
	2a. Subtract 697 from 4542.	1
	2b. How could you check your answer? <i>Tip: think inverse operations! E.g. the inverse of subtraction is addition, inverse of multiplication is division.</i>	1
	3. $50\ 006 - 32\ 109 =$	1
	4a. What is the product of 12 and 45?	1
	4b. How could you check your answer?	1
	5. A photography club is having a party. They have £50 to spend on wine. Each bottle costs £4. How many bottles can they buy?	1
Tutor's comments:		7

Name: _____

abingdon THE witney college

Curriculum link	N1 (Whole Numbers)		Marks
	6. $298 \times 45 =$		1
	7a. $5688 \div 8 =$		1
	7b. Which inverse operation could you use to check your answer?		1
	8. $5274 \div 6 =$		1
	9. Sarah wins a million pounds on the lottery. She buys a sports car for £127, 340. How much money does she have left?		1
	10. Mark saves £35 each week for a holiday. How can he work out how many weeks it will take to save £550? Circle the correct answer. A $35 \div 550$ B $550 \div 35$ C $550 - 35$ D 35×550		1
	11. A group of 341 students are going to London for the day. Each coach holds 45 passengers. How many coaches must the school book?		1
Tutor's comments:	Total Score		<u> </u> 14
			<u> </u> 7

ANSWER SHEET. Suggested efficient methods in brackets but there may well be other methods!	Pre GCSE Maths 2003/4. Homework 2. Efficient written methods and checking with inverse operations.
---	--

For each question (except Q10) use a written method of your choice. Please **DO NOT use a calculator.** You **must show** all your working. Use the shaded left hand column or a separate sheet if you need more room for your working.

Curriculum link	N1 (Whole Numbers)	Marks
N1/L1.3 Add, subtract, multiply and divide using efficient written methods	<p>1. Find the sum of 104 456 and 3406 3966 (column addition)</p>	1
N1/L2.2 Carry out calculations with numbers of any size using efficient methods. (c) know and use strategies to check answers, e.g. approximate calculations, estimation, (inverse operations).	<p>2a. Subtract 697 from 4542. 3845 (long subtraction using payback or decomposition, see next page for links).</p> <p>2b. How could you check your answer? <i>Tip: think inverse operations! E.g. the inverse of subtraction is addition, inverse of multiplication is division.</i> 3845 + 697 = 4542</p>	1
	<p>3. 50 006 - 32 109 = 17897 (long subtraction using payback or decomposition)</p>	1
	<p>4a. What is the product of 12 and 45? 540 (long multiplication, grid / box method, Napier's rods, Russian multiplication, lattice). Note: for excellent descriptions of these methods see http://www.ex.ac.uk/cimt/mepres/book7/bk7_6.pdf at the University of Exeter Innovation in Maths, Mathematics Enhancement Programme at: http://www.ex.ac.uk/cimt/mep/index.htm</p> <p>4b. How could you check your answer? 540 ÷ 12 = 45 or 540 ÷ 45 = 12</p>	1
	<p>5. A photography club is having a party. They have £50 to spend on wine. Each bottle costs £4. How many bottles can they buy? 50 ÷ 4 = 12 and £2 left over so they can buy 12 bottles of wine.</p>	1
	Tutor's comments:	

Name:

abingdon^{WIT}witney college

Curriculum link	N1 (Whole Numbers)		Marks
	<p>6. $298 \times 45 =$ 13410 (see previous page for links to various written methods of multiplication)</p>		1
	<p>7a. $5688 \div 8 =$ 711</p> <p>7b. Which inverse operation could you use to check your answer? $711 \times 8 = 5688$</p> <p>Note: for very useful handouts on division methods see http://www.bbc.co.uk/skillswise/numbers/wholenumbers/division/written/ from BBC Skillswise at: http://www.bbc.co.uk/skillswise/</p>		1 1
	<p>8. $5274 \div 6 =$ 879</p>		1
	<p>9. Sarah wins a million pounds on the lottery. She buys a sports car for £127, 340. How much money does she have left? $1,000,000 - 127,340 = 872,660$</p> <p>Note: for very useful handouts on various methods of written subtraction see http://www.bbc.co.uk/skillswise/numbers/wholenumbers/addsubtract/written/ from BBC Skillswise at: http://www.bbc.co.uk/skillswise/</p>		1
	<p>10. Mark saves £35 each week for a holiday. How can he work out how many weeks it will take to save £550? Circle the correct answer. A $35 \div 550$ B $550 \div 35$ C $550 - 35$ D 35×550</p>		1
	<p>11. A group of 341 students are going to London for the day. Each coach holds 45 passengers. How many coaches must the school book? 8 coaches - don't leave anyone behind and remember you can't have half a coach!</p>		1
Tutor's comments:		Total Score	<u>14</u> <u>7</u>