


**1** Circle the numbers which are **not** equivalent to 3.75  [2 marks]

$\frac{30}{8}$       37.5%      375%       $\frac{14}{5}$        $3\frac{5}{8}$        $\frac{750}{200}$

**2** Write the following numbers in ascending order.  [2 marks]

0.21      20%       $\frac{3}{10}$       0.211       $\frac{2}{9}$

.....

.....

**3** Is 2.125 or  $2\frac{4}{5}$  closer to  $2\frac{1}{2}$ ? Explain your reasoning.  [2 marks]

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.....

**4** On a new estate of 32 houses,  $\frac{3}{8}$  have two bedrooms.  $\frac{5}{6}$  of the two-bedroom houses have a garage. [2 marks]

What percentage of the whole estate is represented by two-bedroom houses with a garage?

.....

**5** Claire makes soft toys to sell at a Christmas market. [2 marks]

**(a)** Each dog toy costs £3.45 to make and Claire sells them for £5.99.

What is her percentage profit?

.....

**(b)** A tiger toy costs 15% more to make than a dog toy and she makes 80 tiger toys. Claire sells 55 of them for £6.99 and the rest at the reduced price of £4. [4 marks]

What percentage profit does she make on tiger toys?

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**6** At Mathstown School 55% of the students are girls. 40% of the girls and 65% of the boys have school lunch.

**(a)** What percentage of students at the school have school lunch? [3 marks]

.....

**(b)** What fraction of the boys do not have school lunch? [2 marks]

.....

**Score**    /19

For more help on this topic, see Letts GCSE Maths Foundation Revision Guide pages 46–47.

**1** Simplify these ratios and circle the odd one out. You must show all your working.  [2 marks]

£4 : £6      10 : 15      20cm : 3m      750g : 1.125kg      40 seconds : 1 minute

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.....  
.....

**2** Jane is making 'mist blue' paint for her room. She mixes navy blue, grey and white paint in the ratio 1 : 2 : 7

**(a)** How much of each colour does Jane need to make 2 litres of 'mist blue' paint? [3 marks]

Navy blue: ..... ml      Grey: ..... ml      White: ..... ml

**(b)** Jane finds she has  $\frac{3}{4}$  litres of navy blue, 1200ml of grey and 6 litres of white paint.

What is the maximum amount of 'mist blue' she can make? [2 marks]

..... litres

**3** The ratio of A : B is 5 : 8

Complete this statement. A is 


 of B.  [1 mark]

**4** This is a recipe for shortbread:

<b>Makes 15 biscuits</b>			
110g butter	50g sugar	175g flour	50g chocolate chips


**(a)** Amil has 70g of sugar. How many biscuits can he make? [2 marks]

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**(b)** How much flour is needed to make 12 biscuits? [2 marks]

..... g

**5** Lucy makes green paint by mixing yellow and blue paint in the ratio 5 : 2  
Blue paint costs £30 for 5 litres and yellow paint costs £28 for 7 litres.

Lucy sells her green paint for £4.50 per litre. Will she make a profit? Show your working to justify your decision.  [3 marks]

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**Score** /15

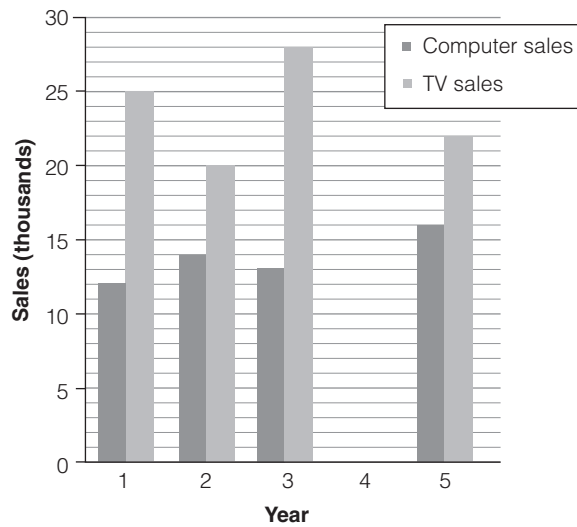
20. Simplify  $(3x^2y^5)^2$

[2]

21. The total TV sales over a five-year period for a national electrical store were 120 000 units. Find the sales figures for computers and TVs in year 4.

[3]

Year	Computer sales (thousands)	TV sales (thousands)
1	12	
2	14	
3	13	
4	$a$	$2a + 5$
5	16	



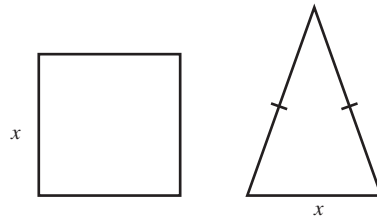
TV sales: .....

Computer sales: .....

22. Find the equation of the line that is parallel to  $y = 2x + 7$  and passes through the point  $(0, -3)$ .

[2]

23. Here is a square and an isosceles triangle.



The length of each of the equal sides of the triangle is 3cm greater than the side of the square.

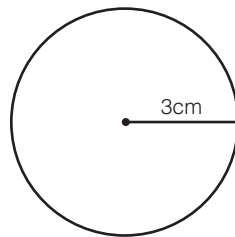
(a) If the perimeters of the two shapes are equal, find the value of  $x$ . [3]

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(b) Show that the height of the triangle is equal to the diagonal of the square. [3]

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.....  
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24. Calculate the circumference of this circle.



Leave your answer in terms of  $\pi$ . [2]

..... cm