

Independent Study Pack 9.3



Please work through this booklet so that it can be marked and feedback given.

- ✓ Use your own workbook to complete the tasks.
- ✓ Use the booklet to complete the tasks.


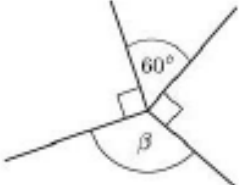
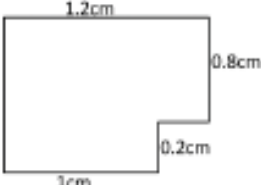
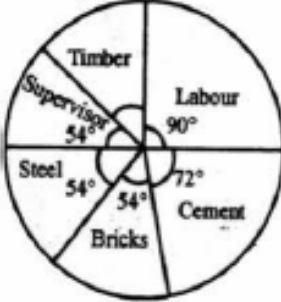
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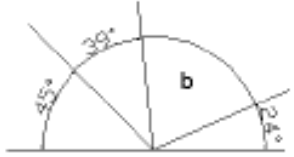



















VMG

Maths:

Complete 1 hour on Hegarty maths. Your teacher will be able to see what you have completed and give you feedback.



<p>1. $3 + 5 \times 7 - 8$</p>	<p>2. Function Machines</p> 
<p>3. The ratio of male to female birds in a bird cage was 5:2. For every 45 males there are _____ females.</p>	<p>4. If a square has sides of 1cm each, what is the area of the square in millimetres?</p>
<p>5. What is the probability of getting a 7 after rolling a single die numbered 1 to 6?</p>	<p>6. Mr Smith kept a record of the number of absences for each student in his class for one term. Here are his results. 0 0 0 8 4 5 5 3 2 1 Work out the mean.</p>
<p>7. Express 96 as a product of it's prime factors.</p>	<p>8. What is the nth term rule of the following sequence 12, 8, 4, 0, -4, -8</p>
<p>9. If I need 75ml of milk to make 15 pancakes, how much milk do I need to make 28 pancakes?</p>	<p>10. Calculate the size of angle β</p> 
<p>11. Five people took part in a sponsored swim. The number of lengths they completed were 16, 11, 8, 8, and 14. What is the median number of lengths completed?</p>	<p>12. A fair die is rolled 180 times, how many times would I expect it to either land on a 3 or a 5.</p>
<p>13. Order the following from smallest to largest: $\frac{2}{3}, \frac{3}{5}, \frac{13}{15}, \frac{2}{5}$</p>	<p>14. Find the value of the following expression if $a = 2$, $b = 5$ and $c = 9$. $c - b + a$</p>
<p>15. What is the perimeter of the shape?</p> 	<p>16. You have a deck of cards. Find the probability of drawing a red card on the first draw, replacing it and drawing a red card on the second draw.</p>
<p>17. Increase £270 by 25%</p>	<p>18. Solve the following equation: $4x + 8 = 16$</p>
<p>19. What is 10,500g in kg?</p>	<p>20. The pie chart shows the what costs are involved building a house. What fraction of the total is labour?</p> 

1. $12 \div 4 + 6 \times 2^2$	<p>2. Function Machines</p> 														
3. At the malt shop the ratio of hotdogs sold to hamburgers sold was 7:5. For every _____ hamburgers sold there were 65 hotdogs sold.	<p>4. What is the area of the rectangle?</p> 														
5. What is the probability of choosing the letter i from the word probability?	<p>6. Peter rolled a 6-sided dice ten times. Here are his scores. 3 2 4 6 3 3 4 2 5 4 Work out the median of his scores.</p>														
7. What is the highest common factor of 31 and 124?	<p>8. What are the missing terms in this sequence? 1, __, 7, 9, __, 13, __</p>														
9. If I need 4kg of cement to make 32kg concrete, how much cement do I need to make 96kg of concrete?	<p>10. Calculate the size of angle b.</p> 														
11. What is the difference between the mean and the median of the following set of numbers; 10, 32, 10, 11, 7	<p>12. Cards are randomly selected from a pack of cards and each then replaced before the next choice. Out of 65 choices how many times would I expect to pick a king?</p>														
13. Order the following from smallest to largest: $\frac{3}{7}, \frac{1}{2}, 0.49, 0.2$	<p>14. Find the value of the following expression if $a = 2$, $b = 5$ and $c = 9$. $4a + bc$</p>														
<p>15. What is the difference between the area and perimeter of the following square?</p> 	<p>16. You have a deck of cards. Find the probability of drawing a 4 through 7 on the first draw, replacing it and drawing a Spade card on the second draw</p>														
<p>17. The prices of all the televisions in a shop are to be increased by 8%. Calculate the new price of a television that originally cost £150</p>	<p>18. Solve the following equation: $14 = -2x$</p>														
19. What is 48cm in mm?	<p>20. If 8 red boxes were sold on Tuesday, add a key to the pictogram to make it correct.</p> <table border="1" data-bbox="790 1724 1412 2004"> <thead> <tr> <th>Days</th> <th>Number of Red-Boxes Sold</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td></td> </tr> <tr> <td>Tuesday</td> <td></td> </tr> <tr> <td>Wednesday</td> <td></td> </tr> <tr> <td>Thursday</td> <td></td> </tr> <tr> <td>Friday</td> <td></td> </tr> <tr> <td>Saturday</td> <td></td> </tr> </tbody> </table>	Days	Number of Red-Boxes Sold	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday	
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Saturday															

English:

When you are checking through your work the first thing you should check for is correct punctuation and spelling. This is going to be a large focus when you take your exams so it is better to ensure we have it all nailed now!



A wrongly placed comma or lack of full stops can change the whole meaning of your piece which could also mean that you lose marks.

Task: Use a green pen to add in any missing spelling and punctuation errors our writer has made.

suddenly i was feeling very sad and alone but i didnt know why i stared into the empty bowl but the gold fish just bobbed on the surfas in a lyfeless way the water was very clean and sparklin jeremy was dead and i had to dispose of his body should i bury him in the garden or should i flush him down the toilet as i thought about it time passed more quickly than i realised it was now two late too go into the garden i walked up the stares to the toilet carryin the heavy bowl i struggld to tip the water into the toilet bowl i didnt fink about what would happen next and as i tryed to flush the water rows up and poured out onto the floor jeremy slide across the tiles toward the door i saw a fluffy paw reach out from the doorway jeremy was gone

‘The Boys’ Toilets ‘ by Robert Westall, From Ghost Stories

Reading comprehension : Read the extract and answer the questions in as much detail as possible.

Section 1: The January term started with a scene of sheer disaster. A muddy excavator as chewing its way across the netball-court, breakfasting on the tarmac with **sinuous** lunges and terrifying swings of its yellow dinosaur neck. One of the stone balls had been knocked of the gate posts, and lay in crushed fragments, like a Malteser trodden on by a giant. The entrance to the science wing was blocked with pile of **ochreous** clay, and curved glazed drainpipes were heaped like school dinners ‘ macaroni.

The girls hung round in groups. One girl came back from the indoor toilets saying Miss Bowker was phoning the Council, and using words that Eliza Bottom had nearly been expelled for last term...

The next girl came back from the toilets saying that Miss Bowker was nearly crying.

Which was definitely a lie, because here was Miss Bowker now, come out to to address them in her best sheepskin coat. Though she was wearing fresh make-up, and her eyes were suspiciously bright, her famous chin was up. She was brief and, and to the point. There was an underground link in the central heating; till it was mended they would be using the old Harvest Road Boys’ school. They would march across now, by forms, in good order, in charge of the prefects.

Section 2: Then the marching little columns came to a miserable little hump-backed bridge over a solitary railway line., empty and rusting. Beyond were the same kind of houses; but afflicted by some dreadful disease, of which the symptoms were a rash of small window-panes, flaking paint, overgrown funereal privet-hedges and sagging gates that would never shut again. And then it seemed to grow colder still, as the slum-clearances started, a great empty plain of broken brick, and the wind hit them full, sandpapering faces and sending grey berets cartwheeling into the wilderness.

Questions:

1. What kind of atmosphere is built up in section 1?
2. Pick three images from section 1 that help to build up this atmosphere. Write down two ideas for each image what is the **denotation**? What is the **connotation**? (If you cannot remember what this means check in section one of the literacy pack!)
3. What mood and effect is created by the following quotes?
 - a) ‘a miserable little hump-backed bridge’
 - b) ‘a solitary railway line’
 - c) ‘houses...afflicted by some dreadful disease’
4. How does the description of the weather add to the mood?
5. What does the word ‘funereal’ suggest about the privet hedges?

Science: Use the information on heart disease and your own research to create a leaflet on heart disease.

Heart disease

Blood vessels called the coronary arteries supply blood to the heart muscles. If they become blocked, a heart attack can happen.

Heart attacks

A heart attack can happen after a sequence of events,

1. fatty deposits build up in the coronary arteries
2. a blood clot can form on a fatty deposit
3. the blood clot can block a coronary artery
4. some heart muscle cells do not get the oxygen and nutrients they need
5. these cells start to die.

In the UK about 300,000 people have a heart attack every year.

Factors for heart disease

The risk of developing heart disease is increased by several factors, including:

- smoking
- high blood pressure
- high levels of salt in the diet
- high levels of saturated fat in the diet.

High levels of salt in the diet can lead to increased blood pressure. High levels of saturated fats in the diet lead to a build of cholesterol in the arteries, causing a plaque and narrowing of the arteries.

