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| Guidance on the use of codes for this mark scheme |
| M | Method mark |
| A | Accuracy mark |
| B | Mark awarded independent of method |
| oe | Or equivalent |
| ft | Follow through |
| cao | Correct answer only |

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| **Question** | **Working** | **Answer** | **Mark** | **AO** | **Notes** | **Grade** |
| **1 a** **b** **c** **d** **e** **f** |  | *D* = 7*w**C* = *pn**Y* = *P* = 100*D**A* = *lw**P* = *nl* | B1B1B1B1B1B1 | 3 | B1 oeB1 oeB1 oeB1 oeB1 oeB1 oe | B |
| **6** |
| **2 a** **b** |  | *C* = 80*h**C* = 80*h* + 50 | B1B1 | 3 | B1 caoB1 cao | B |
| **2** |
| **3 a** **b** |  | NoTo be able to work out what the number thought of, you need to know the answer.YesBecause I can write an equation from the information and solve it.*x* + 15 = 26so *x* = 11 | B1B1B1 | 2 | B1 for No and a reasonB1 for Yes and a reasonB1 for showing the equation and the solution | B |
| **3** |
| **4**  |  | For example, in the rule pay =15 × hours.As hours varies, so will the calculation to calculate pay.Yes, there will be others, there will be hundreds of different possible calculations. | B1B1B1 | 2 | B1 for an explanation of why it is possible for more than one calculation to match with the same ruleB1 for using an example to go alongside the explanationB1 for stating Yes there will be more, and qualifying this | B |
| **3** |
| **5** |  | We use (*x*, *y*) to describe the position, where the first part, *x*, is along the *x*-axis. Then the second part, *y*, is along the *y*-axis.Example, e.g.The convention for point A is (2, 3). If we didn’t have the convention then we could use (3, 2) but that could be confused now with point B. | B1B1 | 2 | B1 for clear explanationB1 for a clear example illustrated with a sketch graph | B |
| **2** |
| **6 a** **b** |  | YesFor example we could write as 2*x* = *y* – 6Rearranging an equation.YesThe first equation has been divided by 2 throughout. | B1B1B1 | 2 | B1 for Yes with an example to illustrateB1 for correct languageB1 for yes and a reason | B |
| **3** |
| **7** |  | Substitute *x* = 3 in the equation to give *y* = 3 + 2 = 5so when *x* = 3, *y* = 5, hence (2, 6) is not on the line **or** The constant term is 2 so the line crosses the *y*-axis at the point (0, 2). Then for every point across it goes up 1 (gradient is 1) so by the time *x* = 3, *y* will = 5. | B1 | 2 | B1 for a clear example | B |
| **1** |
| **8 a** **b** | Money spent = 2 × £14.99 + 2 × £2.50 + (12 × £0.80 + £2.50) = £29.98 + £5 + (£9.60 + £2.50)= £34.98 + £12.10 = £47.08Money left = £70 – £47.08= £22.92 | Is the sum of the cost of the CDs plus the coffee and the taxi less than £70?Money left = £70 – money spentThis is less than £70 so she can afford the taxi. | B1B1M1A1B1 | 3 | B1 for good questionB1 for a correct formula that could be usedM1 for the process of calculating how much has been spentA1 caoB1 for clear, complete solution with correct answer | B |
| **5** |
| **9** |  | Look for the words that will represent variables and if possible, use appropriate letters to represent those variables.e.g.Area = height multiplied by breadthFormula could be *A* = *hb* | B1B1 | 2 | B1 for an explanation of how to link a formula expressed in words to a formula expressed algebraicallyB1 if a suitable example has been included | B |
| **2** |
| **10 a** **b** **c** |  | 2*n* means 2 times *n* while *n* + 2 means add 2 to *n.*3(*c* + 5) means add 5 to *c* and then multiply the answer by 3, 3*c* + 5 means multiply *c* by 3 and then add 5 to the answer.*n*2 means multiply n by itself, 2*n* means multiply *n* by 2. | B1B1B1 | 2 |  B1 for clear explanationB1 for clear explanationB1 for clear explanation | B |
| **3** |
| **11** | Perimeter = 2 × *l* + 2 × 3*l*= 2*l* + 6*l* = 8*l*So 8*l* = 48*l* = 6 cmArea = length × width= *l* × 3*l*= 6 + 3 × 6= 6 + 18 = 24 cm2 | 24 cm2 | M1A1M1A1 | 3 | M1 for using perimeter formulaA1 caoM1 for area formulaA1 ft | B |
| **4** |
| **12** |  = 8 ÷ 4 = 224 – 2 × 4 = 24 – 8= 16 | *C* = 16 | M1A1 | 3 | M1 for the correct process of working out *C*A1 cao | B |
| **2** |
| **13**  |  | Plot the three points and draw the two sides. You can then complete the missing sides of the rectangle to complete the shape as shown in the diagram.Hence find the fourth vertex as in the diagram as (4, 8). | B1B1B1 | 23 | B1 for clear explanationB1 for including a sketch alongside the explanationB1 for correctly indicating (4, 8) | B |
| **3** |
| **14** | Let the smaller number be *n*, then the next even number will be (*n* + 2).*n* + (*n* + 2) = 502*n* + 2 = 502*n* = 48*n* = 24The lower number will be 24 so the larger number will be 26. | 26  | B1M1A1A1 | 23 | B1 for stating starting pointsM1 for method of setting up the equationA1 for solving for the first numberA1 cao | B |
| **4** |
| **15** |  | Example 1As 24 = 6 × 4= 6 × 22 *t* = *ba*2Will give 24 when *b* = 6 and *a* = 2Example 2As 24 = 3 × 8= 3 × (2 + 6)*t* = 3(*a* + *b*)Will give 24 when *a* = 2 and *b* = 6 | B1B1B1B1 | 2 | B1 for first formula that worksB1 for clear explanation of how it was foundB1 for second formula that worksB1 for clear explanation of how it was found | M |
| **4** |

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| **16 a** **b** **c** **d** |  | 5(*c* + 4) = 5*c* + 20Feedback ‘Don’t forget to multiply out both terms in the brackets.’6(*t* – 2) = 6*t* – 12Feedback ‘Don’t forget 6(…..) means multiply both terms by 6.’–3(4 – *s*) = –12 + 3*s*Feedback ‘Don’t forget -3(……) means multiply both terms by 6 and a minus × minus = …15 – (*n* – 4) = 15– *n* + 4 = 15 + 4 – *n*= 19 – *n*Feedback ‘Don’t forget - (*n* – 4) means multiply each term in the bracket by – 1 and that the – in the bracket belongs to the 4 to make it – 4.’ | M1A1M1A1M1A1M1A1 | 2 | M1 for correctly expanding the bracketsA1 for suitable feedbackM1 for correctly expanding the bracketsA1 for suitable feedbackM1 for correctly expanding the bracketsA1 for suitable feedbackM1 for correctly expanding the bracketsA1 for suitable feedback | M |
| **8** |
| **17** |  | Any equation in the form *y* = *mx* + 1 will pass through (0, 1)So *y* = 2*x* + 1*y* = 3*x* + 1will both pass through (0, 1)  | B1B1B1 | 2 | B1 for clear explanationB1 for first correct equationB1 for second correct equation | M |
| **3** |
| **18 a** **b** |  | A correct examplee.g. 2(*z* – 3) + 5*q*A correct examplee.g.  | B1B1 | 2 | B1 for an expression that is equivalent to 4*z* + 5*q* – 6B1 for an expression that simplifies to 5*x* – 2*y* | M |
| 2 |
| **19 a** **b** |  | Own example that works. | B4B1 | 3 | B1 for each correct entry in the tableB1 for their own correct example that works | M |
| 5 |

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| **20** | *Z* = 3*A**Z* = *A* + 18So 3*A* = *A* + 182*A* = 18*A* = 9Substitute *A* = 9 into *Z* = *A* + 18 to give *Z* = 27Check3 × 9 = 27 which is correct. | Zoe has 27 and Alyssa has 9. | B1B1M1A1M1A1 | 3 | B1 for setting up first equationB1 for setting up second equationM1 for method of combining equations to eliminate one variableA1 for first correct answer foundM1 for substituting first answerA1 for correct second answer | M |
| 6 |
| **21** | *n* + *n* + 20 = 2*n* + 202*n* + 20 = 902*n* = 70 *n* = 35So 35 on first shelf and 35 + 20 = 55 on second.Need 90 ÷3 = 30 on each shelf. |  So need to move 5 from first shelf onto third shelf and 25 from second to third shelf.  | B1M1A1A1B1 | 23 | B1 for setting the initial expressionM1 for setting this up to equal 90A1 for first shelf as 35A1 for second shelf as 55B1 for correct process of sorting the books out to 30 on each shelf | M |
| 5 |
| **22** |  | Select *x* values less than 0 and substitute into the equation. | B1 | 2 | B1 for clear explanation | M |
| **1** |
| **23 a** **b** **c** | Using *y* = *mx* + *c* and *m* =  *m* =  =  =  = 2Giving *y* = 2*x* + *c*You know the point (1, 2) is on the line, so substitute into *y* = 2*x* + *c*.2 = 2 × 1 + *c* so *c* = 0.So the equation of the line is *y* = 2*x*. | *y* = 3*y* = 2*x*Use this to find three more points in the third quadrant, e.g. (–1, –2), (–3, –6), (–4, –8) | B1M1M1A1M1A1 | 2 | B1 caoM1 for correct process of finding gradient in using *y* = *mx* + *c*M1 for correct process to find *c*A1 for *y* = 2*x*M1 for correctly only using negative values of *x*A1 for three correct coordinates | M |
| **6** |
| **24** |  | Since *y* = 2*x* + 2*y* = 2(*x* + 1)Hence for any integer value of *x*, *y* will be an even number. | B1 | 2 | B1 for clear explanation | M |
| **1** |
| **25** | *n*th term of first sequence is 6*n* – 1*n*th term of second sequence is 3*n* – 2So for a common term:6*n* – 1 = 3*n* – 23*n* = –1So *n* is not a whole number. And hence there is no term in both sequences. | No  | B1B1M1B1A1 | 23 | B1 for *n*th term of first sequenceB1 for *n*th term of second sequenceM1 for method of putting both *n*th terms equal to each otherB1 correctly finding *n* to be non-integerA1 for No alongside clear solution | M |
| **5** |
| **26 a** **b** | D (5, 1)Area of trapezium = × (4 + 10) × 5=  × 14 × 535 cm2 | (5, 1)35 cm2 | B1M1A1 | 3 | B1 caoM1 for correct method in finding area of trapeziumA1 cao | M |
| **3** |
| **27** | Sketch a graph: | 11 am | B1B1B1B1 | 3 | B1 for showing runner on graph or explainingB1 for showing cyclist on graph or explainingB1 for showing where the two lines meet on graph or explainingB1 cao | M |
| **4** |
| **28** | 100, 96, 92, 88, 84, 80, 76, 72, 68, 64, 60, 56, 52, 48, 44, 40, 36, 32, 28, 24, 20, 16, 12, 8, 42, 8, 14, 20, 26, 32, 38, 44, 50, 56, 62, 68, 74, 80, 86, 92, 98Those in common 8, 20, 32, 44, 56, 68, 80, 92 | 8, 20, 32, 44, 56, 68, 80, 92 | M1M1A1 | 3 | M1 for process of accounting for first sequenceM1 for process of accounting for second sequenceA1 for all 8 correct terms | M |
| **3** |
| **29** | Left hand graph is *x* + *y* = 5Right hand graph is *y* = *z* + 1Substitute *y* into first equation*x* + *z* + 1 = 5*x* + *z* = 4 |  | B1B1M1A1B2 | 3 | B1 first graph equationB1 second graph equationM1 substituting to eliminate *y*A1 caoB1 for graph drawn with x on vertical axis. Allow *x* on horizontal axisB1 for *x* + *z* = 4 drawn correctly | M |
| **6** |
| **30 a** **b** **c** | Distance = 2 × 25 km = 50 km50 km ÷ 8 hours= 6.25 km per hour. e.g. What is Philip’s highest speed?At what times did Philip have a rest?A two part question, getting more difficult.And a mark scheme. | 6.25 km/h | M1A1B1B2 | 23 | M1 for division of total distance by timeA1 caoB1 for an example of a questions that could be asked about this situationB1 for a two part question using the graph with increase in difficultyB1 for suitable mark scheme | M |
| **5** |
| **31** |  | Own storySketch graph Question for the graph | B1B1B1 | 2 | B1 for suitable storyB1 for matching sketch graphB1 for suitable question | M |
| **3** |
| **32 a i** **ii** **b** **c** | 35 × 8 + 1035 × 1435*n* + 10 = 22035*n* = 210*n* = = 6(7 × 35) + 20 = £265(7 × 35) = 10 = £255 | £290£4906 sessions£10 more | M1A1M1A1M1A1M1A1 | 3 | M1 for the correct methodA1 caoM1 for correct methodA1 caoM1 for process of sorting which rule to useA1 caoM1 for finding suitable calculations to find the differenceA1 cao | M |
| **8** |
| **33** |  | 10 + 15 = 25 = 5215 + 21 = 36 = 62 | B4 |  | B1 for each correct part of the number pattern provided correct signs and symbols are present | M |
| **4** |

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| **34 a** **b** **c** **d / e** |  | Triangle drawn36 cm48 cm63 139 143 806 710 cm | B1B1B1B1 | 3 | B1 for diagram drawn for all shapesB1 caoB1 caoB1 cao | M |
| **4** |
| **35 a** **b**  |  | Same difference of 2.4 but starting value is different.What are the differencesWhat is the starting value.  | B1B1B1B1 | 2 | B1 caoB1 caoB1 caoB1 cao | M |
| **4** |
| **36 a** **b** |  | Multiple of 4Nobecause we need to know the starting value as well.  | B1B1B1 | 2 | B1 caoB1 for noB1 for reason alongside no | M |
| **3** |
| **37**  |  | BoysGet a red egg each from each of 4 girls: 4 redOne green egg each other: 2 greenGirlsGet a blue egg from each of the 2 boys: 2 blueOne yellow egg from each other will be 3 yellow eggs each: 12 yellow | B1B1B1B1B1 | 3 | B1 for explanation of 4 redB1 for explanation of 2 greenB1 for explanation of 2 blueB1 for explanation of 12 yellowB1 for complete clear solution | M |
| **5** |
| **38** | Example2*n*2 = 2 × (32) = 2 × 9 = 18(2 × 3)2 = 6 × 6 = 36 | Using BIDMAS for 2*n*2 tells you to calculate the power first. BIDMAS for (2*n*)2 tells you that you do the calculation inside the bracket first. | A1 | 2 | A1 for an explanation. An example could be given to support the argument | M |
| **1** |

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| **39** |  | A letter, say *f*, stands for an unknown if it is in an equation such as 3*f* + 2 = 14. Then *f* = 4 is the only number that satisfies this equation.A letter stands for an variable if it is part of an equation that has more than two letters.E.g. *A* = πr2 , where both *A* and *r* are variables that will be different for different values of *A* or *r*. | B1B1B1B1 | 2 | B1 for clear explanationB1 for an example alongside the explanationB1 for a clear explanationB1 for an example alongside the explanation | M |
| **4** |
| **40 a** **b** |  | **ii**, **v** and **vi** might be difficult as they all involve squaring a term.The classic error made in **ii** will be to calculate half of *at* and then to square that. The same error can be found in **vi** where 2πr can be calculated first and then squared.**ii** and **vi** are also difficult to rearrange as they involve a quadratic element and it’s not easy to make each variable the subject of the formula.Classic errors in rearranging *s* = *ut* + *at*2 to make *a* the subject include:Incorrect sign when changing sides, e.g. *s* + *ut* = *at*2Incorrect removal of fraction e.g.  (*s* + *t*) = *at*2 | B2B2 | 2 | B1 for identifying some examples with a valid reasonB1 for clear identification and explanation of classic errorsB1 for identifying some examples with a valid reasonB1 for clear identification and explanation of classic errors | M |
| **4** |

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| **41** |  | Start with numbers that work= 2.5So *z* =  will satisfy the conditions.Start with a formula say*z* = Substitute *z* = 2.5, *s* = 6, *t* = 2 to find *x*.5 = 18 – 8 + *x*. *x* = –5*z* = satisfies the conditions. | M1A1M1A1B1 | 23 | M1 for first method, e.g. starting with numbersA1 for an example that worksM1 for second method, e.g. starting with a formulaA1 for an example that worksB1 for clear complete solution showing two different methods and two examples | M |
| **5** |
| **42** |  | = = *n* + 3 | M1A1 | 2 | M1 for factorisingA1 for any correct expression | M |
| **2** |
| **43** |  | Let base length be *b*, then height will be 3*b*Area of triangle =  × base × height=  × *b* × 3*b*= *b*2Where *A* = 6*b*2 = 6*b*2 = 2 × = 4*b* = 2so height is 3 × 2 which is 6 cm. | B1B1B1M1A1A1 | 3 | B1 for stating variablesB1 for stating triangle formulaB1 for correct expressionM1 for equating 6 with found expressionA1 for *b* = 2A1 for 6 cm | M |
| **6** |

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| **44 a** **b** |

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| *x* | *x*3 | *x* + *x*3 | Too... |
| 1 | 1 | 2 | small |
| 2 | 8 | 10 | small |
| 3 | 27 | 30 | big |
| 2.5 | 15.63 | 18.13 | small |
| 2.6 | 17.58 | 20.18 | big |
| 2.55 | 16.58 | 19.13 | small |

|  |  |  |  |
| --- | --- | --- | --- |
| *x* | *x* + 2 | *x*(*x* + 2) | Too... |
| 7 | 9 | 63 | small |
| 8 | 10 | 80 | big |
| 7.5 | 9.5 | 71.25 | big |
| 7.3 | 9.3 | 67.89 | exact |

 | You could use trial and improvement or a graph to help you decide where to start.Use trial and improvement to solve both problems.Number is 2.6Width is 7.3 cm | B1M1M2A1M2A1 | 2 | B1 for explanation of suitable methods, could also be graphsM1 for using their suggested method(s)M1 for finding the range including the solutionM1 for process of finding which of the 1 dp trials is closestA1 for 2.6 or more accurateM1 for finding the range including the solutionM1 for process of finding which of the 1 dp trials is closestA1 cao | H |
| **8** |
| **45 a** **b i** **ii** **iii** |  | ‘I think of a number and double it’ just has an expression of 2*x* where *x* is the number I thought of – still unknown at the moment.‘I think of a number and double it – the answer is 12’ has a solution that I know is 6.Onee.g. 10 = *p* + 3Because each solution is *p* = 7 | B1B1B1B1 | 2 | B1 for clear explanation of the differenceB1 caoB1 for a correct exampleB1 for a clear explanation | H |
| **4** |

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| **46** | Looking at total counters needed for each step, he uses:Step 1: 6 countersStep 2: 12 countersStep 3: 18 countersStep 4: 24 countersStep *n*: 6*n* countersAdding how many counters he needs in total:Step 1: 6 countersStep 2: 18 countersStep 3: 36 countersStep 4: 60 countersLooking at the pattern suggests products being involved, I see that this pattern can be written asStep 1: 3 × 1 × 2 = 6Step 2: 3 × 2 × 3 = 18Step 3: 3 × 3 × 4 = 36Step 4: 3 × 4 × 5 = 60Step *n*: 3*n*(*n* + 1)I need to find a value for *n* where this total is first over 1000Use trial and improvement

|  |  |  |  |
| --- | --- | --- | --- |
| *n* | *n* + 1 | 3*n*(*n* + 1) | Too… |
| 10 | 11 | 330 | small |
| 20 | 21 | 1260 | big |
| 15 | 16 | 720 | small |
| 17 | 18 | 918 | small |
| 18 | 19 | 1026 | big |

 | Harry will run out of counters while trying to complete step 18. | M1A1M1M1B1B1M1A1 | 3 | M1 for the process of finding how many counters needed for each stepA1 for 6*n*M1 for the process of finding the total number of counters used by each stepM1 for the process of looking to generalise this patternB1 for the generalisationB1 for the explanation of what he needed to do.M1 for a suitable process of finding which step he would get toA1 cao  | H |
| **8** |
| **47** |  | No. All the terms will be even. | B1B1 | 2 | B1 for noB1 for clear explanation | H |
| **2** |

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| **48** | *H* = 1.10*E**E* = *C* – 50*D* = *E**C* = 500Charles is in the next roundSubstitute *C* = 500 into each equation:*E* = *C* – 50*E* = 450Eliza is in the next round*D* =  × 450 = 300Denise will not be in the next round*H* = 450 × 1.10 = 495Hussein will be in the next round. | There will be 3 candidates in the next round. | B1M1A1M1A1M1A1B1 | 3 | B1 for setting up all the equations from the given dataM1 for substituting *C* = 500A1 for *E* = 450 and staying in next roundM1 for calculating *D*A1 for *D* = 300 and not being in the next roundM1 for calculating *H*A1 for 495 and being in next roundB1 for stating 3 candidates in next round | H |
| **8** |
| **49** | (*x* + 1)2 = *x*2 + *x* + *x* + 1 | (*x* + 1)2 = *x*2 + 2*x* + 1As required. | B2B1 | 2 | B1 for showing the *x*2 in the correct placeB1 for correctly showing *x*, *x* and 1B1 for clearly showing the required result from the diagram | H |
| **3** |

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| **50 a** **b** **c** **d** **e** |  1 6 15 20 15 6 1 1 7 21 35 35 21 7 11 8 28 56 70 56 28 8 1Looking at the diagonal rows:The first diagonal row contains only 1s.The second diagonal consists of all [counting numbers](http://www.cut-the-knot.org/do_you_know/few_words.shtml#whole): 1, 2, 3, 4, 5, etc.The third row consists of the [triangle numbers](http://www.cut-the-knot.org/do_you_know/numbers.shtml#square): 1, 3, 6, 10, 15, etc.Triangle numbers1, 2, 4, 8, 16, 32 ….Multiplying by 2 each time, the *n*th term will be 2*n* – 1 |  | B1B3B1B1B1 | 23 | B1 for correct next three rowsB1 for first patternB1 for second patternB1 for third patternB1 for triangle numbersB1 for correct sequenceB1 for clear explanation | H |
| **7** |
| **51** | 6(*x* – *c*) = 5*x* – 46*x* – 6*c* = 5*x* – 4*x* = 6*c* – 46*c* is always even as even × odd/even = even4 is evenSo *x* must be even as even – even = even  |  | M1A1B1 | 2 | M1 for expanding the bracketA1 for *x* as subjectB1 for clear explanation | H |
| **3** |
| **52** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *n* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  |  |  |  |  |  |  |  |  |
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Only  is a terminating decimal. | B1B1B1 | 2 | B1 for showing the pattern of fractionsB1 for showing all the decimalsB1 for clear explanation | H |
| **3** |
| **53 a** **b** **c** **d** **e** **f**  **g** **h** |  | evenoddevenevenevenevenoddeven | B1B1B1B1B1B1B1B1 | 2 | B1 caoB1 caoB1 caoB1 caoB1 caoB1 caoB1 caoB1 cao | H |
| **8** |
| **54 a** **b** **c** **d** |  | *t* = : Graph BOne person will take a long time, many people will take a short time.*s* = –4.9*t*2 + 40*t* + 80: Graph DThis is a quadratic graph and it shows the value 80 when *t* is 0, the height of the cliff.*y* = 3*x* + 320: Graph AThis will be a linear graph and this graph also crosses the vertical axis at (320, 0) showing his starting pay before selling any items.*x*2 + 72*x* – 225 = 0: Graph CThe area from the dimensions will create a quadratic graph which moves further and further into the first quadrant. | B2B1B2B1B2B1B2B1 | 23 | B1 for correct equationB1 for correct graphB1 for good reason for choiceB1 for correct equationB1 for correct graphB1 for good reason for choiceB1 for correct equationB1 for correct graph B1 for good reason for choiceB1 for correct equationB1 for correct graphB1 for good reason for choice | H |
| **12** |
| **55** |  | **c** and **d** can be difficult because they contain minus signs and this is a point where errors are made, combining minus signs.In substituting *x* = –3 into *t* = –2(3 – *x*) , a classic error is to assume 3 – –3 is 0.In substituting *x* = –3 into *z* = , a classic error is to give a negative divided by a negative a negative answer.A suggestion to avoid these errors is to remember that when multiplying or dividing with positive and negative numbers, same signs means positive, different signs means negative. | B1B2B1 | 2 | B1 for identifying some examples with a valid reasonB1 for clear identification of one classic error with one equationB1 for another classic errorB1 for a satisfactory suggestion | H |
| **4** |

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| --- | --- | --- | --- | --- | --- | --- |
| **56** |  | The similarities are that both have an equals sign and both require the manipulation of terms.The difference is that in solving an equation you end up with a numerical answer, but in rearranging you still have a formula. | B1B1 | 2 | B1 for clear explanation of similaritiesB1 for clear explanation of differences | H |
| **2** |
| **57 a** **b** **c** **d** |  | The two straight-line graphs will be parallel, with the same gradient of 2.*y* = 2*x* crosses the *y*-axis at the origin and *y* = 2*x* + 6 crosses the *y*-axis at *y* = 6The two straight-line graphs will be parallel, with the same gradient of 1.*y* = *x* + 5 crosses the *y*-axis at *y* = 5, and *y* = *x* – 6 crosses the *y*-axis at *y* = –6The two straight-line graphs will cross each other at (,) and each one is a reflection of the other in a vertical mirror line.The two straight-line graphs will both cross the *y*-axis at the origin, one with gradient 2, another with a gradient of . | B2B2B2B2 | 2 | B1 for explanation of parallelB1 for explanation containing points of intersection of axesB1 for explanation of parallelB1 for explanation containing points of intersection of axesB1 for explanation containing point of intersectionB1 for explanation of symmetryB1 for explanation of passing through originB1 for explanation about gradient | H |
| **8** |