**Year 9 EOY Exam 2014 NUMBER**

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| Level 3 | Level 4 | Level 5 |
| 6 opportunities. Suggested grading:2 = 3B, 4 = 3P, 6 = 3A. Work at Level 4 can count towards Level 3 if needed. | 7 opportunities. Suggested grading:2 = 4B, 4 = 4P, 6 = 4A. Work at Level 5 can count towards Level 4 if needed. | 6 opportunities. Suggested grading:2 = 5B, 3 = 5P, 5 = 5A. |
| 1a 0.561c 56/100 (not simplified or simplified incorrectly)2 110, 5, 1015 (all 3 or correct final answer). 3 3.4, 4.3, 4.33, 4.4, 13.35, 13.46a 1/4 of 48 = 126b 1/3 of 36 = 12 She loses 12. **P = 2****A = 4** | **1b** 56%**1c** 56/100 = 14/25 (simplified answer only okay)**4** Calculates distance from first to last hurdle (82.26 m).**5a** -7oC**5b** 24 oC**6b** She loses 12, had 36 (+ 4), ends up with 28 marbles.**8B** Finds discount on bike (30% of 1300 = $390)**M = 5** | 4 Distance from first to last hurdle is 82.26 m. Ten hurdles have 9 gaps between them. Therefore, spacing is 82.26 / 9 = 9.14 m6c She has 24 out of her 48 original marbles (50%) OR accept she has 28 marbles, had 48 = 28/48 = 58%7 18/5.50 = 3.27 i.e saves for 4 weeks to have enough.8A Takes 80 weeks (given). Total paid for bike is 15 x 80 + 200 = $14008B (1) Cost of bike will be $9108B (2) Time to save is 61 weeks (51 weeks to pay off $760 to parents plus 10 weeks of saving). Students have shown adequate evidence if they calculate the weeks to pay back the parents and forget to add 10.8B (3) Costs $1300 (given). Saving is now 16.50 per week. Takes 79 weeks (nearest week) **E = 5** |

**Year 9 EOY Exam 2014 ALGEBRA**

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| Level 3 | Level 4 | Level 5 |
| 7 opportunities. Suggested grading:2 = 3B, 4 = 3P, 6 = 3A. Work at Level 4 can count towards Level 3 if needed. | 18 opportunities. Suggested grading:6 = 4B, 10 = 4P, 14 = 4A. Work at Level 5 can count towards Level 4 if needed. | 8 opportunities. Suggested grading:2 = 5B, 4 = 5P, 6 = 5A. |
| 1a At least 2 different pairs of numbers suggested.2a 52b n = 65a 4f5b 5y5fi 2n10a 4(x + y)**P = 3****A = 5** | 1b Yes – it is okay for x and y to be the same.1c Writes at least 2 value equations using the variables p and q, remaining true to their stated values.2c 42d n = 4 3 Suggests one solution e.g. 12 loaves of bread.4a e.g. 52 – 1.5n = 10 5c 8n + 35d p36a n + 1 + 4 + n + 1 + 4 = 2n + 106b 4(n + 1) = 4n + 47a 4p + 87b n2 – n8a -2x2  + 10x8b 2x – 88c 5a2 + 6a**M = 10**8d -16 + 3x10c p(4 + p)9a $89b He will have to pay $2 to his aunt! (-$2) | 2e n = 33 Suggests more than one solution including at least one that uses different items e.g. 6 bottles of milk and 3 loaves of bread (bottle of milk = 3 eggs, loaf = 2 eggs, apple = ½ egg)4 (Writes correct equation AND solves 4b n = 28 minutes).7e -n + 4 or 4 – n5fii 5(n-1) or equivalent.7c 3p – 15 + p2 + 8p = p2 + 11p – 159c 5 times**E = 4** |

**Year 9 EOY Exam 2014 STATISTICS**

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| Level 3 | Level 4 | Level 5 |
| 4 opportunities. Suggested grading:1 = 3B, 3 = 3P, 4 = 3A. Work at Level 4 can count towards Level 3 if needed. | 10 opportunities. Suggested grading:3 = 4B, 6= 4P, 8 = 4A. Work at Level 5 can count towards Level 4 if needed. | 6 opportunities. Suggested grading:2 = 5B, 3 = 5P, 5 = 5A. |
| 1a Scatter plot2a Sunday, end of Week 23a DVD4c 50-60**P = 2****A = 3** | 1a Looking for relationships between two variables1b Line fitted by eye, follows general shape of the points.1c “Also do more chin-ups”1d Circles the point at (32, 10) and states that it is below the trend line.2b No, overall trend is fairly flat. Maybe even slightly descending.3b 123c 10.8 degrees.4a 47 +/- 2 (by summing bar heights.)4d Any feature e.g. outlier at/above 100, single peak…5b Either median: Boys’ is 8.5, Girls’ is 12**M = 7** | 1d Circles the point at (32, 10) and interprets e.g. can do less chin-ups than you would expect, given the number of press-ups they can do.2c A detailed description e.g. dips after Monday, slowly climbs until Saturday and then a big drop to the minimum at Sunday.3d Describes a method that either refers to unbiased selection or ensuring a representative sample in some aspect.4b The histogram gives intervals rather than whole numbers. The bar than includes 20 also includes other numbers.5a Justified answer e.g. “Yes – 8/20 are male, that is not too far from half” e.g. “No , the sample should be half male and half female but there is only 40% male”.5b Calculates the 2 medians. Girls’ is 12, Boys’ is 8.5 and comments that the Girls seem to have older phones. A mention of the fact that this is sample data and only gives an estimate is desirable. **E = 4** |

**Year 9 EOY Exam 2014 TRANSFORMATIONS**

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| Level 3 | Level 4 | Level 5 |
| 5 opportunities. Suggested grading:2 = 3B, 3 = 3P, 4 = 3A. Work at Level 4 can count towards Level 3 if needed. | 10 opportunities. Suggested grading:3 = 4B, 6= 4P, 8 = 4A. Work at Level 5 can count towards Level 4 if needed. | 5 opportunities. Suggested grading:1 = 5B, 2 = 5P, 3 = 5A. |
| 1b D1c CD1d DCF or FCD2a  **P = 2****A = 3**4a 2 (more than 1 and less than 3) | 1a F and C2b 3a 3b 5 **6** a  b  c  d 6 e f**M = 7** | 78 1. 1 1 2
2. 5 5 10
3. 4 4 8

**9**Accept any 2 clear logical explanations of transformations which exist. Shapes must be CLEARLY explained as well as method of transformation. **E = 3****E = 4** |