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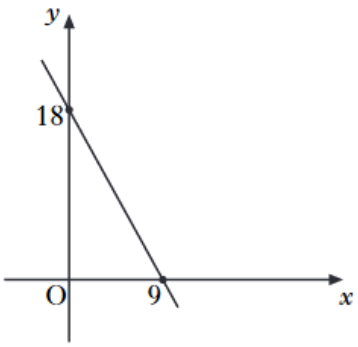
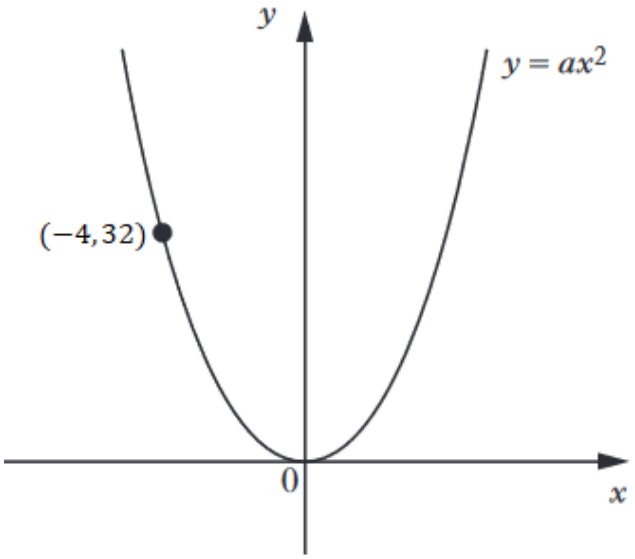
| D1 | Non-Calculator Paper | |
| 1 | Evaluate $1\frac{2}{3} - \frac{7}{8}$ | 2 |
| 2 | The marks for a group of students in their November Test are listed below.<br><br>$41 \quad 56 \quad 68 \quad 59 \quad 43 \quad 37 \quad 70 \quad 58 \quad 61 \quad 47 \quad 75 \quad 66$<br><br>Calculate the median and the interquartile range | 3 |
| 3 | Multiply out the brackets and collect like terms $(x-3)(x^2+4x-1)$ | 3 |
| 4 | Given that $f(x) = 5 - 3x$,<br>(a) evaluate $x = -1$<br>(b) find $b$ given that $f(b) = 11$ | 3 |
| 5 | A straight line cuts the $x$-axis at the point $(9,0)$ and the $y$-axis at the point $(0,18)$ as shown.<br><br>  <br><br><br>Find the equation of this line. | 2 |
| 6 | Solve, algebraically, the system of equations $5a - 2b = 17$<br>$2a - 5b = 11$ | 3 |
| 7 | The diagram shows part of the graph of $y = ax^2$.<br><br>The graph passes through the point $(-4, 32)$.<br><br>Find the value of $a$.<br><br>  <br> | 2 |

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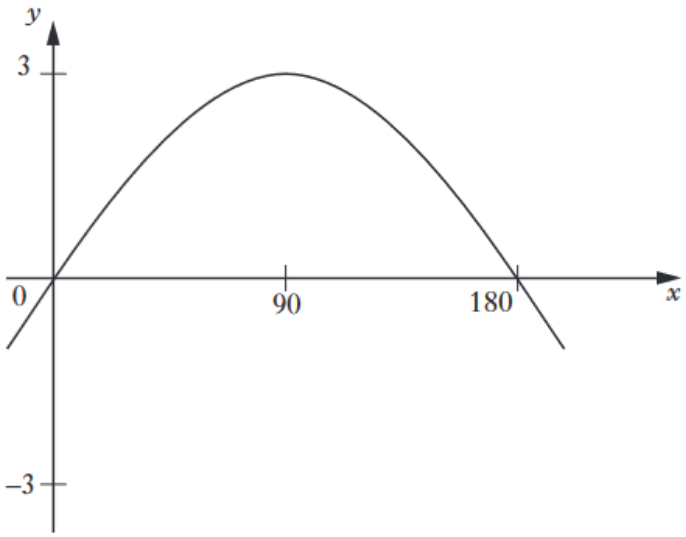
|---|---|---|
| 8 | Simplify $\frac{10p^7}{2p^3 \times p}$ | 2 |
| 9 | Part of the graph of $y = a \sin bx°$ is shown in the diagram.<br>  <br><br>State the values of $a$ and $b$. | 2 |
| 10 | Three of the following have the same value.<br>$2\sqrt{6}, \quad \sqrt{2} \times \sqrt{12}, \quad 3\sqrt{8}, \quad \sqrt{24}$<br>Which one has a different value. Give a reason for your answer | 2 |
| 11 | Simplify $\frac{x^6}{y^2} \div \frac{x^3}{y^2}$ | 2 |
| 12 | Two functions are given below<br>$f(x) = x^2 - 4x$<br>$g(x) = 2x + 7$<br>(a) If $f(x) = g(x)$, show that $x^2 - 6x - 7 = 0$<br>(b) Hence find algebraically the values of $x$ for which $f(x) = g(x)$ | 2<br>2 |
| | **30 marks** | |