## Preliminary Mathematics Standard Portfolio Summary

Name: Teacher:

|   | Concept   | Summary | Examples                                      | Create your own question and solve |
|---|---|---------|---|------------------------------------|
| 1 | 2.01<br>Simplifying<br>Algebraic<br>Expressions |         | Simplify: $2k + 8 - k^2 - 4k$                 |                                    |
|   |   |         | Simplify: $\frac{2x^2}{w} \times \frac{b}{2}$ |                                    |
|   |   |         | Simplify: $\frac{x}{3} \div \frac{x}{2}$      |                                    |
|   |   |         |   |                                    |

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|---|--------------------------------------|---------|---|------------------------------------|
| 2 | 2.02 Expanding Algebraic Expressions |         | <b>Expand:</b> $3ab(a + b)$   |                                    |
| 3 | 2.03 Formulas                        |         | Use the compound interest formula, $A = P(1 + r)^n$ to calculate the amount to which a principal of \$5600 will grow if invested at 9.4%pa for 5 years. |                                    |

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|---|-----------------------------|---------|---|------------------------------------|
| 4 | 2.04 Solving<br>Equations   |         | <b>Solve:</b> $\frac{x-2}{3} + 10 = 20$                     |                                    |
|   |                             |         | <b>Solve:</b><br>8e = 2(e - 6)                              |                                    |
| 5 | 2.05 Formulas and equations |         | If $a = 2$ , $b = 3$ , solve for c: $\frac{2c}{a} + b = 10$ |                                    |

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|---|--|---------|---|------------------------------------|
| 6 | 2.06 Changing the subject of a formula |         | Make $F$ the subject of the formula $C = \frac{5}{9}(F - 32)$ |                                    |

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|---|---|---------|--|------------------------------------|
| 7 | 12.01 Blood<br>alcohol<br>content (BAC) |         | Who has the lowest blood alcohol level? A 78kg male who consumed 6 standard drinks over 4 hours or a 58kg female who consumed 4 standard drinks over 3 hours. Use calculations to justify your choice. |                                    |