

Essential Skills 7

The skills in this series of worksheets appear frequently.

These are the GIFTS you must take to succeed



Completing the Square

Write in the form $a(x + b)^2 + c$:

1. $3x^2 + 6x + 1$

2. $2x^2 + 12x - 3$

3. $5x^2 - 10x - 7$

4. $3x^2 - 18x + 4$

5. $4x^2 + 24x + 3$

6. $2x^2 - 20x - 5$

7. $3 - 8x - x^2$

8. $5 + 16x - 8x^2$

9. $2x^2 - 8x - 2$

10. $3x^2 + 9x + 1$



APPLYING QUESTION

(a) Write $2x^2 - 20x + 54$ in the form $a(x + b)^2 + c$

(b) Hence show that $y = \frac{2}{3}x^3 - 10x^2 + 54x - 4$ is always increasing.