

## Completing The Square Answer Key

Increasingly  
Difficult  
Exercises

|    |   |    |  |    |   |
|----|---|----|--|----|---|
| a) | $(x + 3)^2$                                   | b) | $(x - 2)^2$                              | c) | $(x + 2)^2 - 4$                                       |
| d) | $(x - 4)^2 - 16$                              | e) | $2(x + 3)^2 - 18$                        | f) | $(x + 3)^2 - 5$                                       |
| g) | $(x - 5)^2 - 20$                              | h) | $(x + \frac{5}{2})^2 + \frac{3}{4}$      | i) | $2(x + \frac{5}{4})^2 - \frac{33}{8}$                 |
| j) | $(x + 3)^2 - 9$<br>$x = 0 \text{ or } x = -6$ | k) | $(x + 1)^2 - 6$<br>$x = \pm\sqrt{6} - 1$ | l) | $2(x + 2)^2 - 13$<br>$x = \pm\sqrt{\frac{13}{2}} - 2$ |

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| g) | $(x - 5)^2 - 20$                              | h) | $(x + \frac{5}{2})^2 + \frac{3}{4}$      | i) | $2(x + \frac{5}{4})^2 - \frac{33}{8}$                 |
| j) | $(x + 3)^2 - 9$<br>$x = 0 \text{ or } x = -6$ | k) | $(x + 1)^2 - 6$<br>$x = \pm\sqrt{6} - 1$ | l) | $2(x + 2)^2 - 13$<br>$x = \pm\sqrt{\frac{13}{2}} - 2$ |