Review Quadratics Sec 1.6 – Answers

1. x = -3, x = -1/3 Factor into (x + 3)(3x + 1) = 0
2. x = -7, x = 3 Factor into (x + 7)(x – 3) = 0
3. x = -1, x = 7 Complete the square into (x – 3)2 = 16
4. x = 5 ±4$\sqrt{2}$ Complete the square into (x – 5)2 = 32
5. x = $\frac{-1 \pm 2i\sqrt{2}}{3}$
6. x = -*i*, x = -2*i*
7. x = 0, x = 3 Lost a root if you divided by an expression
8. x = 4 Gained a root of x = -3 by squaring both sides
9. x = 4, x = -2 Factor into 4(x – 4)(x + 2) = 0
10. x = $\frac{-2 \pm \sqrt{19}}{5}$ Quadratic formula - reduced from x = $\frac{-4 \pm \sqrt{76}}{10}$
11. x = 7, x = 1 Square root of both side but don’t forget ±
12. x = -3 ± 2i Divide by 2 first, then square root both side with ±
13. x = 5 Gained a root of x = -2 by multiplying both sides by the LCD
14. x = 5 No gain or loss
15. x = $\frac{5 \pm 2\sqrt{5}}{4}$ Quadratic formula - reduced from x = $\frac{40 \pm \sqrt{1280}}{32}$
16. x = $\frac{-7 \pm 2\sqrt{11}}{4}$ Square root of both side but don’t forget ±
17. Discriminant = 0. There is only one real root which is a double root.
18. Discriminant = -236. There are two imaginary conjugate roots so there are no real roots.