

7. $x = 6$

8. $x = 9$

9. $x = -3$

10. $x = 2$

11. 5 days

12. Graph the left side of the equation and the right side of the equation. The x-coordinate of the point of intersection is the solution.

14. The solution is $x = 2$ because $7^{(2+1)} = 7^3 = 343$.

15. The bases are not the same so the exponents cannot be set equal to each other;

$$(2^3)^{2x} = 2^{x+5}; 2^{3(2x)} = 2^{x+5}; 2^{6x} = 2^{x+5}; 6x = x + 5;$$

$$x = 1$$

17. $x = 2$

18. $x = 4$

19. $x = 1$

20. $x = 2$

21. $x = 4$

22. $x = -4$

23. 6 weeks

24. 3 hours

26. 5 days