

Answers to the algebra exam review:

1. $\frac{xy-7x+3}{y-7}$

2. $\frac{14}{z-5}$

3. $\frac{(5-a)(5+3a)}{(a+5)^3}$

4. $\frac{c}{b(b+c)}$

5. $6-x$, for $x \neq 0, -6$

6. $\frac{-c}{x(x+h)}$

7. $\frac{1-3x^2}{2\sqrt{x}(x^2+1)^2}$

8. $\frac{y-18}{(y-6)^{3/2}}$

9. $\frac{1}{b^{4n}a^{2t-1}}$

10. x^{2-4m}

11. $-(n+7)^3(3n+16)$

12. e^{5a}

13. $\frac{4y}{y+4x}$

14. $\frac{-x}{3}$

15. 5

16. $\frac{-3}{(x+h)(x-h)}$

17. $\log\left(\frac{tv^3}{w^2}\right)$

18. $100x$

19. x^2

20. $2\sqrt{x}$

21. $x = \frac{-2}{3}$

22. $(-\infty, -1) \cup (3, \infty)$

23. $w = 1, \frac{1}{7}$

24. $x = \frac{108}{17}$

25. $y = \frac{7 \pm 2\sqrt{14}}{7}$

26. $x = -\sqrt[3]{\frac{1}{5}}$

27. $x = 8$

28. $b = \frac{3+10a}{4a^2-5a}$

29. $x = 3$

30. $t = \frac{7a-3}{4-2a}$

31. $r = \frac{9\pi^2 M}{n^2}$

32. $k = \pm\sqrt{98}$

33. $c = 11, -4$

34. $y = \frac{2-e^7}{3}$

35. $k = \frac{\ln 4}{1-\ln 4}$

36. $y = \frac{3-\ln 17}{2}$

37. $x = 0, -\frac{7}{8}$

38. $w = 0, \sqrt[3]{1/7}$

39. $w = \frac{1}{100}, \sqrt[3]{10}$

40. $\left(\frac{-1}{2}, \infty\right)$