

Name \_\_\_\_\_ Period \_\_\_\_\_

The purpose of this review is to help you prepare for the trigonometric identities that we will be studying next.

Solve for x. Do not use a calculator. Show ALL work for full credit.

1.  $\frac{5}{x-5} - \frac{3}{x+5} = \frac{2}{x}$

5.  $\frac{x+1}{x-1} - \frac{x-1}{x+1} = \frac{8}{3}$

2.  $\frac{3}{2x} - \frac{x}{4x^2-1} = \frac{7}{4x+2}$

6.  $2x^3 - 2x - 4xy^2 = 1$  (Find x and y.)

3.  $\frac{x-2}{x^2-x-6} = \frac{1}{x^2-4} + \frac{3}{2x+4}$

7.  $2y^2 - x^2y = x^2y$  (Find x and y.)

4.  $\frac{x-2}{x} - \frac{x-3}{x-6} = \frac{1}{x}$

8.  $4xy + 2y - 2x - 1 = 0$  (Find x and y.)

9.  $2ax - x = 1 - 2a$

13.  $\frac{1}{x-3} + \frac{3}{9-3x} = 0$

10.  $\frac{3}{x^2} + 4x^2 = 7$

14.  $\sqrt{5x+1} + 2 = 6$

11.  $\frac{b}{x} - \frac{3x}{b} = 0$

15.  $\sqrt{5x^2 - 36} = 2x$

12.  $\frac{3}{2x+1} = \frac{3}{2x-1}$

16.  $\sqrt{x^2 + 1} = 1 - x$

$$17. 4 = \sqrt{\frac{7x-10}{9}}$$

$$21. x^2 = 20x - 100$$

$$18. \frac{2}{3} + \sqrt{x} = 1$$

$$22. 25x^2 - 16 = 0$$

$$19. \sqrt{4x} = \frac{1}{3}$$

$$23. 10x^3 = 5x^2$$

$$20. 2x^2 - \sqrt{3}x = 0$$

$$24. 4x^2 + 121 = 44x$$

$$25. 9x^2 = 1$$

26.  $15x^2 - 14x = 49$

30.  $3x^3 - 3x^2 - x = -1$

27.  $3x^2 - 41x = -60$

31.  $cx + dx = c^2 - d^2$

28.  $x^5 - 3x^2 - x = -1$

32.  $2cx + 3dx = 4c^2 + 12cd + 9d^2$

29.  $14xy + 21y - 4x = 6$  (Find x and y.)

33.  $2n(x - n) = x - 5n + 2$