

Math 121: Solutions to Skills 1 Homework

1.  $\frac{4\sqrt{3}}{3}$

2.  $\frac{2\sqrt{10}}{5}$

3.  $\frac{\sqrt[3]{20}}{2}$

4.  $2|x|\sqrt{y}$

5.  $3xy\sqrt[3]{3xy^2}$

6.  $-\frac{3-9\sqrt{5}-\sqrt{2}+3\sqrt{10}}{44}$

7.  $x+\sqrt{3}, x \neq \sqrt{3}$

8.  $15x^2+11x-14$

9.  $5x-3-\frac{2}{x}$

10.  $x^6-1+x^{-6}$

11.  $27x^3-54x^2+36x-8$

12.  $2x^2+\frac{5x}{4}-\frac{3}{4x^2}$

13.  $x-2, x \neq 3$

14.  $\frac{x-10}{(x-2)^2}$

15.  $\frac{81x^8}{y^4}$

16.  $\frac{125x^9}{4y^{13}}$

17.  $\frac{8y^{7/5}}{3x}$

18.  $\frac{4t^{23/12}s^{17/20}}{5}$

19.  $2, -\frac{1}{3}$

20. 120

21.  $x(5x+1)(2x-3)$

22.  $x(x-1)(10x-3)$

23.  $2x^{1/3}(x-2)(2x+3)$

24.  $x(x-2)(x+2)(3x-5)$

25.  $(2x-3)(4x^2+6x+9)$

26. 5

27. -5

28. 3

29. -1

30. 9

31. -2

32.  $\left\{2, \frac{1}{3}, \pm \frac{3\sqrt{5}}{5}\right\}$

33.  $\left\{-3, \frac{3}{5}\right\}$

