N3CS20 Practice Set 05

Instructions: Answer each question on loose leaf, quad-ruled (graph paper), headed properly and written in lead-graphite. Remember to fold paper along the center, work exercises in order top to bottom, left column then right column. Staple multiple pages

1. Solve for the unknown

   a) $x^2 = 529$ b) $n^3 = -729$ c) $a^2 = \sqrt{\frac{324}{729}}$; simplify

2. Simplify using exponent Laws:

   a) $\frac{(-3)^2 \bullet 4^3 \bullet (-1)^8}{4 \bullet (-1)^5}$ b) $\frac{6^4 x^4}{6x^2} =$

   c) Gv1 pg. 28 #18

3. Simplify the radical expressions

   a) $\sqrt{54}$ b) $\sqrt{75}$ c) $5\sqrt{80}$

4. Simplify using Exponent Laws.

   a) Gv1 pg. 35 #10 b) Gv1. pg. 35 # 16
   c) Gv1 pg. 37 #37

5. Simplify using Exponent Laws

   a) Gv1 pg. 37 # 28 b) $\left(n^0\right)^5$

   c) $\left[\left(5^2\right)^{-3}\right]^{-3}$

6. a) Gv1 pg. 47 # 7 b) Gv1 pg. 47 # 12: write exponents positive c) Gv1 pg. 47 # 18

7. Write each repeating decimal as a fraction, reduced.

   a) $0.\overline{42}$ b) $0.4\overline{2}$ c) $0.42\overline{6}$

8. Determine the Perimeter of a square with the given area.

   a) $576in^2$ b) $900m^2$ c) $784cm^2$

9. Determine the Surface area of a cube with the given volume.

   a) $512cm^3$ b) $216in^3$ c) $1{,}728m^3$

10. Simplify:

    a) $6 \div 3 \bullet 2 - 1$ b) $5 - 7 + 8 \div 4 \bullet 2$
    c) $8 \div 2^2(6 - 4 + 8) \div 20 + 1$

11. Evaluate each expression.

    a) $\left(\sqrt{7}\right)^2$ b) $\left(\sqrt{\left(\frac{17}{23}\right)}\right)^2$ c) $\frac{\left(\sqrt{42}\right)^2 - 10}{\left(\sqrt{16}\right)^2}$

12. Evaluate each expression for the given values of the variables; include your units!

    a) $\frac{m}{V}, m = 80kg, V = 360cm^3$

    b) $\frac{1}{2}mv^2, m = 80kg, v = 9.4\frac{m}{s}$

    c) $\frac{v_f - v_i}{t}, v_f = 0\frac{m}{s}, v_i = 80\frac{m}{s}, t = 4.8s$

13. Solve for the unknown. Write your solutions as decimals, where appropriate.

    a) $6x = 13$ b) $\frac{n}{4} = 17$ c) $-2b = -9$

14. a) Gv1 pg. 85 #2 b) Gv1 pg. 85 #6
    c) Gv1 pg. 87 # 26

15. a) Gv1 pg.93 #2 b) Gv1 pg. 93 # 8
    c) Gv1 pg. 95 # 24

16. a) Gv1 pg. 55 #2 b) Gv1 pg. 55 #6
    c) Gv1 pg. 55 #10

17. Simplify:

    a) $6 - 2(3 + x)$ b) $4x - 3(2 - x) + 1$

    c) $6x^2 - 2(3y - x^2) + 4y$

18. Determine the difference:

    a) $17 - 23$ b) $17 - (-23)$ c) $-17 - 23$
    d) $-17 - (-23)$

19. Gv1 pg. 27 #12

20. Gv1 pg. 28 #18

21. Gv1 pg. 29 #33a,b

22. Gv1 pg. 37 #38

23. Gv1 pg. 49 # 40

24. Gv1 pg. 50 # 42

25. Gv1 pg. 77 #42

26. Gv1 pg. 78 #44

27. Gv1 pg. 86 #14

28. Gv1 pg. 95 #30