Math 120 – Ch 10-12 Skills Test Prep – Dr. Loveless

Instructions (Read First):

- Spend **5 minutes** seeing how many equations on this page you can solve. Even a few is fine—this is just your starting point. By Exam 2 (and beyond), you should be able to do all of the first two pages quickly and confidently.
- After 5 minutes, switch to homework: finish Chapter 12 and peek at Chapter 13.
- After quiz section, come back to this prep if you want more solving practice. Solutions will be posted soon so you can learn from mistakes.

This is a skill you can build—keep going! Every problem you try moves you forward.

Participation Code: The code today is **6**.

(*Fun fact: 6 is the first perfect number. Curious what that means? Ask on the discussion board, you don't need to know this for this class*)

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1) $\frac{2x-3}{4}+\frac{5}{2}=6$

2) $5e^{2x+1}-1=10$

3) $8^{x+1}-4=6$

4) $4^{6x}=7$

5) $\log_2(5)=\log_3 x$

6) $2\cdot 5^{x}=10\cdot 3^{x}$

7) $x^{3/2} - \ln(4) = e^2$

8) $\log_{10}(x - 4) = 2$

9) $x^2 + 5x + 2 = 0$

10) $\frac{x+1}{x-2} = 3$

11) $\sqrt[3]{(2x^5 - 1)} = 3$

12) $\sqrt{e^{2x} + 1} + 3 = 7$

Challenge (*optional to try later, requires you to see something or simplify before you can start)*

13) $\sqrt{x} + \sqrt{2x-1} = 5$

14) $\ln(x+2) + \ln(x+3) = \ln(20)$ *(hint: need a log rule to start)*

13) $3^{2t} - 10 * 3^{t} + 9 = 0$ *(hint: There is a quadratic hiding in here)*