MAT 1033 **Practice Test 2**

1 – 17. DETERMINE THE TYPE OF EQUATION, THEN SOLVE USING THE APPROPRIATE METHOD:

1. $2(x+3) - 8 = -4$

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

3. $6x^2 - x = 12$

4. $7 - (2x - 1) = 5x + 2$

5. $\frac{1}{2}x + \frac{3}{4} = 3x$

6. $x^3 - 4x = -4x^2 + 8x$

7. $\frac{7x}{2} - \frac{12}{x} = \frac{x}{2}$

8. $3x^2 - 5x = 0$

9. $2x^2 = 50$

10. $\frac{2}{5}(x-4) = -3$

11. $\frac{4}{x-7} = \frac{9x}{7-x}$

12. $x^2 - 24 = 10x$

13. $.2 - 1.5x = x - .5$

14. $\frac{1}{4} - \frac{x}{6} = \frac{7}{8}$

15. $(p+3)(p-1) = 5$

16. $\frac{2}{5x-2} = \frac{-2}{x+4}$

17. $\frac{3}{x^2-5x+6} = \frac{2}{x-3} + \frac{3}{2-x}$

18 - 21 -- WRITE AN EQUATION AND SOLVE:

18. Five less than three times a number is the same as four more than twice the number. What is the number?

19. The sum of three consecutive odd integers is 153. What are the integers?

20. Given three consecutive integers - twice the third integer is the same as the second integer increased by 21. What are the integers?

21. Eight less than the square of a number is the same as twice the number. Find the number(s).

22 – 25: Solve for the indicated variable

22. P = ab + ad Solve for b

23. P = ab + ad Solve for a

24. Given $ab = \frac{ck}{t}$ *solve for k*

25. Given $ab = \frac{ck}{t}$ *solve for b*

26 – 30: Solve the word problem.

26. A number minus 16 times its reciprocal is 6. Find the number.

27. The sum of a number and 8 times its reciprocal is 6. Find the number.

28. The number of hours worked varies directly with pay earned. If 12 hours of work earns $75, how much is earned for 16 hours?

29. The number of painters working varies inversely with the time required to paint the room. If it takes 50 hours for 9 painters, how long will it take for 15 painters?

30. If the volume varies directly with the square of pressure, and when the volume is 50 cm^3 the pressure is 5 g/cm^2, then what is the volume when the pressure is 3 g/cm^2?

Practice Test 2 Answers:

1. –1 2. $\frac{3}{5}$ 3. –4/3,3/2 4. 6/7 5. 3/10 6. 0,-6,2 7. 2,-2 8. 0,5/3

9. –5,5 10. –7/2 11. $-\frac{4}{9}$ 12. –2,12 13. 7/25 14. $-\frac{15}{4}$ 15. –4,2 16. $-\frac{1}{3}$

17. 2 does not work - No solution 18. 9 19. 49,51,53 20. 18,19,20 21. 4,-2

22. $\frac{p-ad}{a} = b$ 23. $\frac{p}{b+d} = a$ 24. $\frac{abt}{c} = k$ 25. $b = \frac{ck}{at}$ 26. 8 or –2

27. 4 or 2 28. $100 29. 30 hours 30. 18 g/cm^3