

PRACTICE PROBLEMS FOR FINAL- MAT101 (M.Ben-azzouz)

1. Evaluate $-3(x - 2y)$ when $x = -1$ and $y = -3$
2. Translate into an algebraic expression: “Twice the square of a number subtracted from five”
3. Find the quotient: $\frac{8x^3 - 22x^2 - 5x + 12}{4x + 3}$
4. Find the quotient: $\frac{3x^2 - 2x - 7}{x + 2}$
5. Solve: $n^2 + 20n + 91 = 0$
6. Solve: $4t^2 - 19t - 30 = 0$
7. Solve: $s^2 - 4s = 21$
8. Factor: $4x^2 + 16$
9. Factor: $18x^2 - 12x + 2$
10. Factor: $10x^3 + 15x^2 + 20x$
11. Factor: $14w^2 - 29w - 15$
12. Find all numbers such that the sum of the number and 5 is greater than 11 times the number.
13. After a 40% reduction, a shirt is on sale for \$9. What was the original price?
14. Factor: $18y^3 + 39y^2 - 15y$
15. Solve for F : $\frac{1}{E + F} = G$
16. Solve for l : $P = 2l + 2w$
17. Simplify: $[9(x + 5) - 7] + [4(x - 12) + 9]$

18. Simplify: $\frac{5^2 - 4^3 - 3}{9^2 - 2^2 - 1^0}$
19. Simplify: $20 + 4^3 \div (-8) \cdot 2$
20. Simplify: $8|(6 - 13) - 11 + (6 - 32) + (-2) \cdot (-13)|$
21. Simplify: $3\{[6(x^2 - 4) + 5] - 2[5(x^2 + 8) - 10]\}$
22. Translate into an algebraic expression: “The quotient of five and the sum of a number and nine”
23. In which quadrant is the point $(-15, -102)$ located?
24. Factor: $x^3 - 2x^2 - 3x + 6$
25. Solve: $13 - 2x \geq -5x + 7$
26. Solve: $-25x \leq -75$
27. Solve for C: $F = \frac{9}{5}C + 32$
28. Factor: $x^4 - 16$
29. Solve: $6 - 5(x - 3) = 3(2x - 1)$
30. Translate into an algebraic expression: “Twice the sum of a number and five”