

Mat 1033
Test 2 Practice B with Answers

Solve:

_____ 1. $7y + 1 = 29$

_____ 2. $2(x - 3) = -3x + 4$

_____ 3. $5m - (2 + 3m) = 2(m + 1)$

_____ 4. $\frac{2}{3}x + \frac{5}{6}x = 3$

_____ 5. $.05m + .1 = .2m + 1$

Solve by factoring:

_____ 6. $3x^2 - 7x = 0$

_____ 7. $x^2 - 8x - 20 = 0$

_____ 8. $2x^2 = 50$

_____ 9. $5x^2 - 3 = 14x$

Problems 10 – 15: Solve.

_____ 10. $\frac{x}{2} - 1 = \frac{4}{x}$

_____ 11. $\frac{3}{2x+1} = 5$

_____ 12. $\frac{3}{x-4} + \frac{1}{x+2} = \frac{3}{x+2}$

_____ 13. $\frac{4}{2-x} + \frac{5}{x-2} = 1$

_____ 14. $\frac{5}{x-2} - \frac{2}{x+2} = \frac{8}{x^2-4}$

Solve for the indicated variable:

_____ 15. $\frac{ab}{r} = w$ for r

_____ 16. $rt - mw = k$ for r

_____ 17. $M = vt + at$ for t

_____ 18. $J = \frac{1}{3}abd$ for b

A. Write the equation required to solve the problem.

B. Solve the problem.

_____ (a) 19. Fourteen less than the square of a number is the same as 5 times the number. Find the number(s).

_____ (b)

_____ (a) 20. The sum of two consecutive even integers is 78. Find the integers.

_____ (b)

_____ (a) 21. The sum of a number and 5 times its reciprocal is 6. Find the number(s).

_____ (b)

_____ (a) 22. Three times the sum of a number and four is the same as four less than twice the number. Find the number.

_____ (b)

ANSWERS:

1. 4; 2. 2; 3. No Solution because variables drop out and leave a false statement; 4. 2; 5. -6;
6. 0, $\frac{7}{3}$; 7. 10, -2; 8. -5, 5; 9. $-\frac{1}{5}$, 3; 10. -2, 4; 11. $-\frac{1}{5}$; 12. -14; 13. 3; 14. No Solution
because -2 makes denominator equal 0; 15. $\frac{ab}{w}$; 16. $\frac{k+mw}{t}$; 17. $\frac{m}{v+a}$; 18. $\frac{3J}{ad}$;
19. $x^2 - 14 = 5x$; -2, 7; 20. $x + (x + 2) = 78$; 38, 40; 21. $x + \frac{5}{x} = 2x - 4$; -16