

Algebra 1
8.5-8.7 Quiz Review

Name: Key

Factor the expression completely.

1. $x^2 + 5x - 14$

$(x+7)(x-2)$

2. $x^2 - 12x - 64$

$(x-16)(x+4)$

3. $x^2 - 11x + 30$

$(x-4)(x-5)$

4. $x^2 + 3x - 28$

$(x+7)(x-4)$

5. $x^2 - 81$

$(x-9)(x+9)$

6. $49 + x^2 + 14x$

$x^2 + 14x + 49$

$(x+7)^2$

7. ~~$9x^2 - 42x + 49$~~

$4x^2 - 20x + 25$

$(2x-5)^2$

8. $4x^2 - 25$

$(2x-5)(2x+5)$

9. $2x^2 + 5x + 3$

$x^2 + 5x + 6$

$(x+3)(x+2)$

$(2x+3)(x+1)$

10. $6x^2 + 14x + 4$

$2(3x^2 + 7x + 2)$

$2(3x+1)(x+2)$

11. $4x^2 + 15x + 9$

$x^2 + 15x + 36$

$(x+\frac{9}{4})(x+12)$

$(4x+3)(x+3)$

12

$9x^2(7x^4-6)$

Solve the equation.

12. $(x+8)(x-3) = 0$

$-8, 3$

13. $(x+7)^2 = 0$

-7

14. $x^2 - 4x + 3 = 0$

$(x-3)(x-1) = 0$

$3, 1$

15. $x^2 - 5x = 14$

$x^2 - 5x - 14 = 0$

$(x-7)(x+2) = 0$

$7, -2$

16. $0 = x^3 - 100x$

$0 = x(x-10)(x+10)$

$10, 0, 0$

$\pm 10, 0$

17. $3x^2 + 4 = 8x$

$3x^2 - 8x + 4 = 0$

$(3x-2)(x-2) = 0$

$\frac{2}{3}, 2$

18. $x^2 - 6x = -9$

$x^2 - 6x + 9 = 0$

$(x-3)^2 = 0$

3

19. $x^2 - 25 = 0$

$(x-5)(x+5) = 0$

± 5

20. $3x^2 - 3x = 6$

$3(x^2 - x - 2) = 0$

$3(x-2)(x+1) = 0$

$2, -1$

BONUS PROBLEMS:

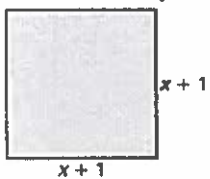
21. Write a quadratic trinomial equation in standard form that has the given solutions: -1 and 3.

$$(x+1)(x-3)$$

$$x^2 - \cancel{3}x +$$

$$x^2 - 2x - 3$$

22. Find an expression for the area of the figure.



A) b.l

$$(x+1)^2$$

B) add all up

$$P = (x+1) + (x+1) + (x+1) + (x+1)$$

$$\text{or } 4(x+1)$$

$$4x + 4$$