



3.1 Puzzle Time

How Can You Get Four Suits For A Dollar?

Write the letter of each answer in the box containing the exercise number.

Solve the equation using square roots.

1. $(3x - 3)^2 = 36$ 2. $x^2 = 81$
 3. $2(x - 2)^2 - 8 = -4$ 4. $5 - 3(2x + 1)^2 = -22$

Solve the equation by factoring.

5. $0 = x^2 + 8x + 16$ 6. $x^2 - 3x = 10$
 7. $x^2 - 64 = 0$ 8. $4x^2 - 12 = 2x$

Find the zero(s) of the function.

9. $f(x) = 2x^2 + 7x - 4$ 10. $f(x) = x^2 - 121$

Solve the equation using any method.

11. $x^2 - 7x = 0$ 12. $3x^2 - 4x = 20x + 27$
 13. $\frac{1}{2}(x - 1)^2 - 4 = -1$ 14. $2x^2 + 5x = 5x + 50$
 15. $-x^2 + 30 + 4x = -2x^2 + 14x + 6$

Answers

- D. $x = -4$
 U. $x = 9; x = -9$
 S. $x = 6; x = 4$
 Y. $x = 2 + \sqrt{2}; x = 2 - \sqrt{2}$
 A. $x = 1; x = -2$
 C. $x = 8; x = -8$
 E. $x = 5; x = -2$
 K. $x = -\frac{3}{2}; x = 2$
 B. $x = 3; x = -1$
 F. $x = 11; x = -11$
 C. $x = 0; x = 7$
 A. $x = -1; x = 9$
 D. $x = 5; x = -5$
 O. $x = \frac{1}{2}; x = -4$
 R. $x = 1 + \sqrt{6}; x = 1 - \sqrt{6}$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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Puzzle Time

What Is The Difference Between A Pterodactyl And A Parrot?

A	B	C	D	E	F
G	H	I	J	K	L
M	N				

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

$-48i$ THE
$3i\sqrt{10}$ KNOW
$25i$ YOU'D
$16i\sqrt{5}$ DIFFERENCE
$x = -3; y = 2$ IF
$i\sqrt{2}; -i\sqrt{2}$ ON
$11 - i$ EVER

Find the square root of the number.

- A. $\sqrt{-625}$ B. $\sqrt{-90}$
 C. $-4\sqrt{-144}$ D. $8\sqrt{-20}$

Find the values of x and y that satisfy the equation.

- E. $-3x + 4i = 2yi + 9$ F. $20 - 5xi = \frac{1}{3}y + 35i$

Add, subtract, or multiply. Write the answer in standard form.

- G. $(8 - i) + (3 + i) - i$ H. $(12 + 7i) - (8 - 4i)$
 I. $4i(-2 + 7i)$ J. $(4 - 6i)(4 + 6i)$

Find the zeros of the function.

- K. $f(x) = -2x^2 - 30$ L. $f(x) = 4x^2 + 8$
 M. $f(x) = \frac{2}{3}x^2 + 18$ N. $f(x) = 3x^2 + 75$

$i\sqrt{15}; -i\sqrt{15}$ SIT
$-28 - 8i$ A
$3i\sqrt{3}; -3i\sqrt{3}$ YOUR
$5i; -5i$ SHOULDER
$4 + 11i$ LET
52 PTERODACTYL
$x = -7; y = 60$ YOU