

Difference of Two Squares:

Facts: 1.

2.

3.

① Eg $j^2 - 16$

② Eg $4n^2 - 49$

① $p^2 - 100$

② $9y^2 - 25$

③ $36x^2 - 49y^2$

③ Eg $50r^2 - 32$

Difference of Two Cubes:Difference of Two Cubes:

Parts 1.

2.

3.

① Eg $a^3 - 8$

① $8k^3 - y^3$

② $w^3 - 27v^3$

③ $64r^3 - 125s^3$

Sum of Two Cubes :

Parts: 1.

2.

3.

(Eq) $c^3 + 27$

① $27m^3 + 125n^3$

② $z^3 + 343d^3$

③ $125w^3 + 8v^3$

Sum or Difference of a Binomial Square

Satisfying Conditions 1.

2.

3.

(Eq) $x^2 + 8x + 16$

① $9x^2 - 30x + 25$

② $k^2 + 20k + 100$

③ $4x^2 - 12x + 9$

$$\textcircled{1} 36x^2 + 24x + 4$$

$$\textcircled{2} 16a^2 + 56a + 49$$

Method General Procedure for Factoring

1.

2.

a)

b)

c)

3.

a)

b)

c)

4.

Label Method used & factor

$$\textcircled{1} 3x^2 - 9x - 12$$

$$\textcircled{2} 4x^2 - 100$$

$$\textcircled{3} x^4 - 64x$$

$$\textcircled{1} 12a^2 - 36a + 27$$

$$\textcircled{2} a^6 - 4a^4b^2$$

$$\textcircled{3} ac + 2a + bc + 2b$$

$$\textcircled{1} 4x^2 + 32x + 64$$

$$\textcircled{2} 8y^2 + 23y - 3$$

$$\textcircled{3} y^4 - 81$$

Term Quadratic Equation:
Standard form:

zero factor Property

Eq $(2x+7)(3x-5)=0$

Method

Solving Quadratic Equations

- 1.
- 2.
- 3.
- 4.
- 5.

Problems Solve:

① $x^2+6x+5=0$

② $3x^3+27x^2-30x=0$

③ $z^2+16z=-64$

④ $5w^2=16w-3$

⑤ $6x^2+13x+6=0$

⑥ $2x^2-32x=0$

Method Problem Solving

- 1.
2.
 - a.
 - b.
 - c.
 - d.
 - e.
- 3.
- 4.
- 5.
- 6.

(A) Area Problems

(Eg) The length of a hall is five times the width. The area of the floor is 45m^2 . Find the length & width of the hall.

#4, 6, 8 p.431

(Eg) #16 p.433

(B) Consecutive Integers

1. Consecutive Integers
2. Consecutive odds/evens

(Eg) The product of the smallest and largest of 3 consecutive odd integers is 16 more than the middle integer. Find the integers.

18, 20, 22 p 433

© Pythagorean formula:

(Eg) The hypotenuse of a right triangle is 3 in. longer than the longer leg. The shorter leg is 3 in. shorter than the longer leg. Find the lengths of the sides of the triangle.

24, 26, 28 p. 433-4

© Solving quadratic models

(Eg) The number of impulses fired after a nerve has been stimulated is modeled by

$$I = -x^2 + 2x + 60$$

where x is in milliseconds (ms) after the stimulation. When will 45 impulses occur?

Do we get 2 solutions?

Why is only one answer acceptable?

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