

A1 SOL Packet #1a

SOL Released Test Questions:

Solving Equations

SAMPLE A

2013 Alg1 SOL

What is the solution to $3(2x - 1) = 3$?

- A $x = \frac{1}{3}$
- B $x = \frac{2}{3}$
- C $x = 1$
- D $x = 5$

What value of p will make this equation true?

$$\frac{6p + 4}{6} = \frac{4p - 8}{3}$$

- A -10
- B -6
- C 2
- D 10

2013

The formula shown can be used to find A , the amount of money Raul has in his savings account.

$$A = P + Pt$$

Raul wants to find r , the rate of interest his money earns. Which equation is correctly solved for r ?

- A $r = APt$
- B $r = A - 2Pt$
- C $r = \frac{A}{2Pt}$
- D $r = \frac{A - P}{Pt}$

2013

A data set with an even number of data points is ordered from least to greatest. The middle two data points are represented by x_1 and x_2 . This formula can be used to find the median of the data set.

$$m = \frac{x_1 + x_2}{2}$$

Which shows this formula solved for x_1 ?

- A $x_1 = m - \frac{x_2}{2}$
- B $x_1 = 2m - x_2$
- C $x_1 = 2m - 2x_2$
- D $x_1 = m - 2 - x_2$

2013

Directions: Click on the statement you want to select.

Michelle correctly solved a linear equation and the last line of her work was: $1=2$

Which statement best describes the solution to the equation Michelle was solving?

- The only solution is 1.
- The only solution is 2.
- The solutions are both 1 and 2.
- The equation has infinitely many solutions.
- The equation has no solutions.

FIG 2009

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What value of x will make the equation $3(x+15) - 6x = -6(x-3)$ true?

- A -9
- B -6
- C 2
- D 3

2010

In addition to an \$80 bonus, Joan earned \$8 per hour working last week. Joan's total earnings last week were \$240. How many total hours did she work last week?

- A 10
- B 20
- C 30
- D 40

2010

Kristen heard that it is 82° Fahrenheit outside. She knows that $F = \frac{9}{5}C + 32$, where F represents the temperature in degrees Fahrenheit and C represents the temperature in degrees Celsius. Which is closest to the temperature outside, in degrees Celsius?

- F 28
- G 63
- H 90
- J 180

2009

What is the solution to the following equation?

$$3(x+5) - 10 = -2(x+10)$$

- F -7
- G -5
- H 1
- J 3

2009

The length of a certain rectangle is six more than three times its width. If the width of the rectangle is 4 units, what is its length?

- A 10
- B 13
- C 18
- D 27

2009

What is the solution to the following equation?

$$7x - 5 = 2x + 5$$

- F $x = 2$
- G $x = 3$
- H $x = 4$
- J $x = 5$

2009

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What value of m satisfies the equation shown below?

$$5(m - 5) = 3(m + 1)$$

- A 14
- B 9
- C 3.5
- D -7.5

2008

What is the solution to the following equation?

$$5(x + 2) = 7(4 - x)$$

- A -9.0
- B 1.5
- C 3.2
- D 9.0

2007

What is the solution to the following equation?

$$4x - 1 = 2x + 5$$

- F $x = 1$
- G $x = 2$
- H $x = 3$
- J $x = 4$

2005

Ron paid \$75.00 for 5 compact disks and a case. If the price of each compact disk was \$12.60, what was the price of the case?

- A \$12.00
- B \$12.50
- C \$15.00
- D \$63.00

2005

What is the solution to

$$4(2x - 3) = 2(3x + 1)?$$

- F -5
- G 1
- H 7
- J 10

2005

The perimeter of a rectangular playing field is 244 feet. If its length is 2 feet longer than twice its width, what are the dimensions of the field?

- F 20 ft, 41 ft
- G 21 ft, 40 ft
- H 40 ft, 82 ft
- J 42 ft, 80 ft

2005

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What is the solution to

$$5 - \frac{n}{2} = 12?$$

- F -34
- G -14
- H 14
- J 34

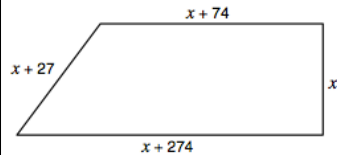
2004

What is the solution to

$$2 - 4a = 16?$$

- F 18
- G 10
- H $-\frac{7}{2}$
- J $-\frac{9}{2}$

2003



Tambria's property has the shape of a trapezoid with the dimensions shown. If the perimeter of the property is 3,279 feet, what is the value of x ?

- F 726 ft
- G 781.25 ft
- H 913.5 ft
- J 1,452 ft

2003

The volume of a cylinder is given by

$$V = \pi r^2 h$$

where r is the radius of the cylinder and h is the cylinder's height. Which equation could be used to solve for h ?

- A $h = \pi r^2 V$
- B $h = \frac{V}{\pi r^2}$
- C $h = V + \pi r^2$
- D $h = V - \pi r^2$

2003

What is the solution to $12 - \frac{1}{9}d = 17$?

- F $d = -243$
- G $d = -45$
- H $d = -3$
- J $d = -\frac{5}{9}$

2002

Kristy is making a rectangular quilt that is 2 feet longer than it is wide. If the perimeter of the quilt is to be 32 feet, what will be its dimensions?

- A 4 ft by 8 ft
- B 5 ft by 7 ft
- C 7 ft by 9 ft
- D 15 ft by 17 ft

2002

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Pauline sells cookie baskets. She charges \$5 for the basket plus \$2 per cookie. If one filled basket sells for \$31, how many cookies are in it?

- F 13
- G 15
- H 18
- J 20

2001

During a sale, an automobile dealer sold 69 cars and trucks. If she sold 27 more cars than trucks, how many of each did she sell?

- F 48 cars, 21 trucks
- G 45 cars, 24 trucks
- H 42 cars, 27 trucks
- J 35 cars, 34 trucks

2001

Mary published her first book. She was given \$10,000.00 and an additional \$0.10 for each copy of the book that sold. Her earnings, d , in dollars, from the publication of her book are given by

$$d = 10,000 + 0.1n$$

where n is the number of copies sold. During the first year Mary earned \$35,000.00 from the publication and sale of her book. How many copies of her book sold in the first year?

- F 25,000
- G 35,000
- H 250,000
- J 350,000

2001

Using the distance formula, $d = rt$, what is the value of t when $d = 3,520$ and $r = 550$?

- A 6.4
- B 2,970
- C 4,070
- D 1,936,000

2000

A rectangle has a perimeter of 60 inches and length of 22 inches. What is the width of the rectangle?

- A 176 in.
- B 164 in.
- C 14 in.
- D 8 in.

2000