

Math Bingo!

Lesson Information
<i>By Annette Raphael</i>
Subject:
Algebra
Topic:
All topics
Technology:
None
Level:
Easy Moderate
Activity Structure:
Self-Guided Problem Solving
Duration of Activity:
Whole Class Period

Overview:

This is a version of the classic board game BINGO. But instead of simply reading out the numbers, the caller gives a math clue to a number that appears on the BINGO board. This is a great way to review a wide array of algebra topics, from percents, to mixture problems, to solving equations.

Learning Objectives:

- To review algebraic topics
- To have students become problem solvers

Materials:

- Bingo game boards and chips
- Paper
- Pencils
- Calculators

Notes on the game: The caller should read out the clue associated with the number (for example, if the caller says, “The smallest positive integer,” the BINGO players could place a chip over the number B1. This game can be played alone or in pairs. Calculators should be made available to the students.

These clues came from Donald Duncan, Milton Academy Math Department and Theoni Pappas' 1996 Mathematics Calendar, and Annette Raphael

B

1. The smallest positive integer
2. The number of answers to $|x| = 24$
3. Numerator in the smallest fraction of the following expression: $\frac{5}{3} + \frac{3}{16} + \frac{7}{4}$
4. Exponent when x^3 is multiplied by x
5. The number of minutes that it takes to go $\frac{1}{2}$ mile at 6 miles per hour.
6. What is x if $y=3$ in $x+5y = 21$?
7. Find the sum of all the factors of four
8. Find the slope of the line through (3,1) and (4,9)
9. How many pounds of salt must be added to 50 pounds of a 20% salt solution to make a solution containing 19 pounds of salt?
10. Round $3\frac{3}{7} * 2\frac{8}{9}$ to the nearest whole number
11. The reciprocal of $1\frac{3}{8}$ is a fraction which has 8 as its numerator and what as its denominator?
12. What is the smallest common denominator of these fractions: $\frac{5}{6}, \frac{3}{4}, \frac{5}{12}, \frac{1}{3}$?
13. Hypotenuse of a right triangle if the legs are 5 and 12
14. What is the value of 'a' that makes $42x + 3 = 3(ax + 1)$?
15. What is y if $x=-3$ in $3x + 2y = 21$?

I

16. If the sides of a right triangle are increased fourfold, how many times does its area increase?
17. The solution to $4x - 5 = 3x + 12$
18. What is the y-intercept of the line given by $.2y = 8x + 3.6$?
19. Find the larger solution to $(12x - 23)(x - 19) = 0$
20. Find the largest coefficient of $20x^2 + 9x + 18$
21. Find the leg of a right triangle with a hypotenuse of 29 and the other leg of 20.

22. One more than the number of total cubes in six layers if the first layer has one cube, the second layer has two cubes, the third layer has three cubes, etc.
23. Suppose a bag has 10 red, 18 blue and 5 green marbles. The odds of picking a red marble are 10 out of what?
24. Find the product of the numerator and the denominator of the fraction that is equivalent to $\frac{2}{3}$ if the numerator is 4.
25. How much solution must be added to 50 pounds of a 20% salt solution to make 75 pounds of solution?
26. $\frac{1}{2}x + 2 = 15$. What is the value of x ?
27. What is the value of $3x + 12$ if $x=5$?
28. $12\frac{1}{2}\%$ of 224 is what number?
29. What is the sum of the roots of $(x + 1)(x - 30) = 0$?
30. The percent that 6 is of 20.

N

31. Tim is 22 years older than his sister. In two years he will be three times as old as she will be. How old is he right now?
32. What is the coefficient of x in the numerator of the simplified form of $\frac{6x + 2}{2} + \frac{7x + 5}{3}$?
33. What is the product of the roots of $(x - 1)(3 - x)(x - 11) = 0$?
34. What is the solution to $2(9x - 7) = 17x + 20$?
35. What is the smallest integer larger than the reciprocal of $\frac{2}{69}$?
36. What is the sum of the odd numbers between 0 and 12?
37. What number has the following property: The sum of the digits is 10 and the difference is 4. The number is less than 50.
38. What is the product of the exponents in the simplified form of $\frac{5x^{21}y^4}{x^2y^2}$?
39. What is the value of $(2x - 3)(4x + 1)$ if $x=3$?
40. Find the sum of the exponents and the coefficients of the simplified form of $(2x^2y^4)^4$?
41. What is the third prime larger than 29?
42. Find the sum of the numerator and the denominator of a fraction that is equivalent to $\frac{2}{5}$ if the numerator is 12.

43. Bill worked 20 hours at \$8.00 per hour and spend his earnings on 10 CD's at \$11.70 each. How much did he have left?
44. Find the perimeter of a rectangle of width 12 units and area 120 square units.
45. Find the solution to $\frac{2x}{3} + 105 = 3x$.

G

46. Twice the ninth prime.
47. The sum of the digits of this number is 11 and the units digit is 5 less than 3 times the tens digit.
48. What is the lowest common denominator of $\frac{5}{3} + \frac{3}{16} - \frac{7}{4}$?
49. What is the larger root of $(2x - 96)(5x - 245) = 0$?
50. How many hours does it take to go 200 miles at a rate of 4 miles per hour?
51. What is the constant term of $9[15 - 2(x + 5)] + 6$
52. Number of even integers between 1 and 105
53. The hypotenuse of a right triangle if the legs are 28 and 45
54. The number whose prime factorization is $3^3 * 2$
55. Area of a rectangle with a width of 5 and a perimeter of 32
56. Lowest common denominator necessary to add $\frac{3}{8} + \frac{1}{4} + \frac{5}{7}$
57. 2 cubed more than the square of the sum of 6 and 1.
58. Largest integer smaller than the solution to $2x - 5 = 7x - 299$
59. Smallest odd integer larger than 57.956
60. Number of games played by a team that won 80% of its games and lost 12 games

O

61. The tens digit is 5 more than the units digit and the number is 2 less than 9 times the sum of the digits.
62. Smallest integer over 58 that has exactly four factors
63. If a square with a side of 8 inches gets stretched out and shortened a bit so that the length is increased by 1 and the width is decreased by 1, the new area is how many square units?
64. Square 2^3
65. Number of the integer solutions to $|x| \leq 32$
66. How many miles will a car go which is traveling 30 miles per hour for two hours and 12 minutes?
67. The last two digits of the year someone was born who turned 39 in 2006.
68. 34 times the solution to $\frac{2x}{3} - \frac{3x}{5} = \frac{2}{15}$
69. Value of $8x^3 + 3x - 1$ if $x = 2$
70. Solution to $4x + 3 = 10x - 417$

71. Smallest prime larger than 70.
72. The integer root of $(7x - 1)(x - 72)(3x - 13) = 0$
73. Nine more than the square of 8
74. 100 plus the solution of $2x - 9 = 3x + 17$
75. What percent of 64 is 48?