

SOLVING EQUATIONS Solve the equation.

20. $x^2 - 10x + 21 = 0$

21. $n^2 - 7n - 30 = 0$

22. $w^2 - 15w + 44 = 0$

23. $a^2 + 5a = 50$

24. $r^2 + 2r = 24$

25. $t^2 + 9t = -20$

26. $y^2 - 2y - 8 = 7$

27. $m^2 + 22 = -23m$

28. $b^2 + 5 = 8b - 10$

29. **★ MULTIPLE CHOICE** What are the solutions of the equation $x^2 - 8x = 240$?

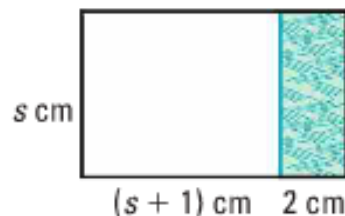
Ⓐ -20 and -12

Ⓑ -20 and 12

Ⓒ 20 and -12

Ⓓ 12 and 20

59. **CARD DESIGN** You are designing a gift card that has a border along one side, as shown. The area of the white part of the card is 30 square centimeters. What is the area of the border?



60. CONSTRUCTION A contractor is building a porch along two sides of a house. The house is rectangular with a width of 32 feet and a length of 50 feet. The porch will have the same width on each side of the house.



- Write a polynomial that represents the combined area of the first floor of the house and the porch.
- The owners want the combined area of the first floor and the porch to be 2320 square feet. How wide should the contractor build the porch?

Solve the equation.

66. $x + 12 = 4$

68. $6n + 4 = -14$

70. $3 - 2(w + 7) = -1$

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

Find the product.

74. $(3x + 7)(x - 5)$

76. $(c + 2)(c^2 + c - 4)$

78. $(2k - 8)(2k + 8)$

80. $(5x + 16y)^2$