4-4 Factoring Special Cases

Do NOT shout out the answer, as we want everyone to have a chance to process. What do these numbers have in common?

1	36	121	256
4	49	144	289
9	64	169	324
16	81	196	361
25	100	225	400

*After taking out the GCF, look for perfect squares.

Factor completly.

$$2x^2 - 24x + 72$$

$$2(x^2 - 12x + 36)$$

$$2(x - 6)(x - 6)$$

$$2(x - 6)^2$$

*After taking out the GCF, look for perfect squares.

Factor completly.

$$16x^2 - 81$$

$$(4x - 9)(4x + 9)$$

*After taking out the GCF, look for perfect squares.

Factor completly.

$$25x^2 + 20x + 4$$

Practice makes perfect!

p. 221 #47-69 skip 51, 56, 67

Factor each expression that can be factored. For an expression that cannot be factored into a product of two binomials, explain why.

See Pr

47. $x^2 + 2x + 1$

48. $t^2 - 14t + 49$

49. $k^2 - 18k + 81$

50. $4z^2 - 20z + 25$

51. $4x^2 + 16x + 8$

52. $81z^2 + 36z +$

53. $x^2 - 4$

54. $25a^2 - 120a + 144$

55. $81y^2 + 49$

57. The area in square centimeters of a square area rug is $25x^2 - 10x + 1$. What are the dimensions of the rug in terms of x?

Factor each expression completely.

58. $9x^2 - 36$

59. $18z^2 - 8$

60. $4n^2 - 20n + 24$

61. $64t^2 - 16$

62. $12x^2 + 36x + 27$

63. $3y^2 + 24y + 45$

64. $2a^2 - 16a + 32$

65. $3x^2 - 24x - 27$

66. $-x^2 + 5x - 4$

67. $4x^2 - 22x + 10$

68. $-6z^2 - 600$

69. $-\frac{1}{16}s^2 + 1$