2-39. See below:

b. 1 cm by 1 cm, 1 cm by 10 cm, 10 cm by 10 cm

c. A = 1 cm^2 and P = 4 cm, A = 10 cm^2 and P = 22 cm, A = 100 cm^2 and P = 40 cm

d. 135 cm^2

e. Common ways: 1 hundred-block with 2 ten-blocks and 7 one-blocks, or 12 ten-blocks and 7 one-blocks.

f. 3 ten-blocks and 4 one-blocks, or 2 ten-blocks and 14 one-blocks, or 1 ten-block and 24 one-blocks, or 34 one-blocks

2-40. CHANGING THE AREA

a. The shape has an area of 101 square cm and a perimeter of 42 cm.

b. The perimeter did not change, but the area is now 102 sq. cm.

c. The perimeter would have increased by 2 cm.

d. When the area is increased sometimes the perimeter also increases, but it can also stay the same depending on how the additional area is added to the shape.

2-41. CHANGING THE AREA

a. Sample responses: 1 hundred-block with 1 one-block, 10 ten-blocks with 1 one-block, 101 one-blocks, 5 ten-blocks with 51 one-blocks, etc.

b. A perimeter of 204 cm is possible if 10 ten-blocks and 1 one-block (or 100 one-blocks) are stretched out end-to-end.

2-42. See below:

a. smallest 42 cm, largest 222 cm

b. 107 is prime, so it's only possible rectangle is 1 by 107 with a perimeter of 216 cm

c. Smallest possible perimeter is a square that is 12 cm by 12 cm has perimeter of 48 cm; the largest possible perimeter is a 1 cm by 144 cm rectangle with a perimeter of 290 cm. Can also be made into rectangles measuring 2 cm by 72 cm, 3 cm by 48 cm, 4 cm by 36 cm, 6cm by 24 cm, and 8 cm by 18 cm.

2-43. See below:

a. 30 square inches

b. 90 square inches

2-44. See below:

6. 11 by 1, 10 by 2, 9 by 3, 8 by 4, 7 by 5, 6 by 6. The areas are 11 square units, 20 square units, 27 square units, 32 square units, 35 square units, and 36 square units, respectively. The largest is 36 square units and the smallest is 11 square units.