

1-62. See below:

- a. Jenny has 16, 25, or 36 pennies.
- b. She could have 36. 36: 1 by 36, 2 by 18, 3 by 12, 4 by 9, 6 by 6.
- c. 11, 13, 17, 19, 23, 29, 31, or 37

1-63. See below:

- a. 4, 6, 8, 9, 10, 12, 14 .
- b. 2, 3, 5, 7, 11, 13, 17, 19, and 23

1-64. No, not all odd numbers are prime. Composite odd numbers less than 25: 9, 15, 21

1-65. See below:

- a. One possible solution: 19 (2 by 9 R1, 3 by 6 R1, 4 by 4 R3)
- b. One possible solutions: 31 (2 by 15 R1, 3 by 10 R1, 5 by 6 R1, 4 by 7 R3)
- c. One possible solution: 37 (2 by 18 R1, 3 by 12 R1, 4 by 9 R1, 6 by 6 R1, 5 by 7 R2)

1-66. See below:

- b. Students are likely to decide that 0 is an even number that is neither prime nor composite. (Note that this is in agreement with most mathematicians.) They are likely to decide that 1 is prime (and odd). (Note that mathematicians agree that 1 is neither prime nor composite.) 2 is the smallest prime number and the only even prime number.

1-67. See below:

- a. 4: $12 \times 1 \times 1$, $2 \times 6 \times 1$, $3 \times 4 \times 1$, $3 \times 2 \times 2$;
- b. 4: $16 \times 1 \times 1$, $8 \times 2 \times 1$, $4 \times 4 \times 1$, $4 \times 2 \times 2$;
- c. 5: $30 \times 1 \times 1$, $15 \times 2 \times 1$, $10 \times 3 \times 1$, $6 \times 5 \times 1$, $5 \times 3 \times 2$;
- d. 15: $120 \times 1 \times 1$, $60 \times 2 \times 1$, $40 \times 3 \times 1$, $30 \times 4 \times 1$, $20 \times 6 \times 1$, $15 \times 8 \times 1$, $12 \times 10 \times 1$, $30 \times 2 \times 2$, $20 \times 3 \times 2$, $15 \times 4 \times 2$, $12 \times 5 \times 2$, $10 \times 4 \times 3$, $10 \times 6 \times 2$, $8 \times 5 \times 3$, $6 \times 5 \times 4$