Unit 8, Lesson 11

Finding Perfect Squares

Let's explore perfect squares.

11.1 Finding Perfect Squares

Is each number or expression a perfect square? Explain to your partner how you know.

1. $\frac{1}{16}$
2. 9
3. 39
4. 121
5. 324
6. x^2
7. $100t$
8. $49a^2$
9. $3c^2$
10. $(x-1)^2$

11.2 Solving Perfect Square Equations

Solve these equations. Be prepared to explain your reasoning.

1. $x^2 = 16$

2. $x^2 - 25 = 0$

3. $x^2 + 13 = 113$

4. $3x^2 = 75$

5. $121 - x^2 = 0$

6. $98 - 2x^2 = 0$

7. $(x - 2)^2 = 100$

8. $(x + 1)(x + 1) = 9$

11.3 Row Game: Making Expressions Simpler

Work independently on your column to write each expression using the fewest number of terms possible.

Partner A

1. $(4a)^2$
2. $9b^2 + 39b^2 + b^2$
3. $6c \cdot 6c$
4. $4d \cdot 16d$
5. $(\frac{1}{4}k)^2$
6. $(\frac{1}{2}n)(\frac{1}{18}n)$
7. $(x + 3)^2$
8. $(4y - 1)(4y - 1)$

Partner B

1. $5a^2 + 11a^2$
2. $(7b)^2$
3. $4c \cdot 9c$
4. $8d \cdot 8d$
5. $k^2 - \frac{15}{16}k^2$
6. $(\frac{1}{6}n)^2$
7. $(x + 3)(x + 3)$
8. $(4y - 1)^2$