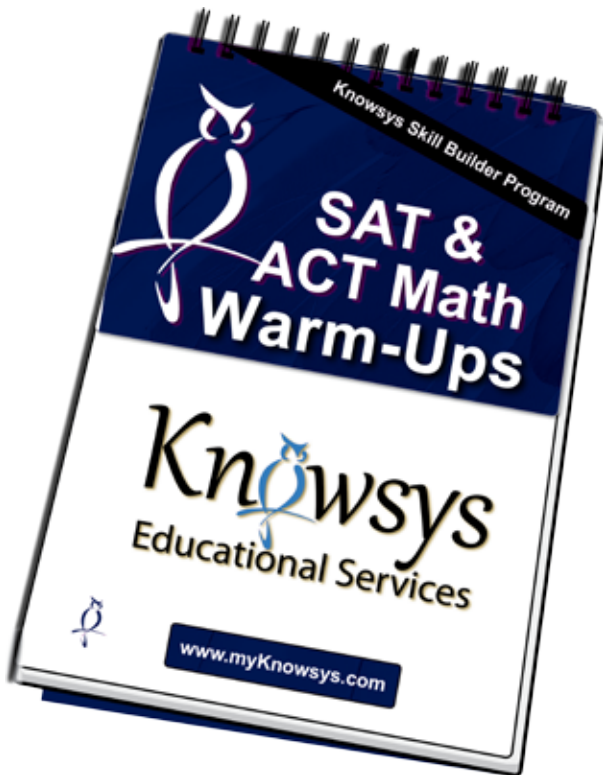


# SAT & ACT Math Flip-Top Books

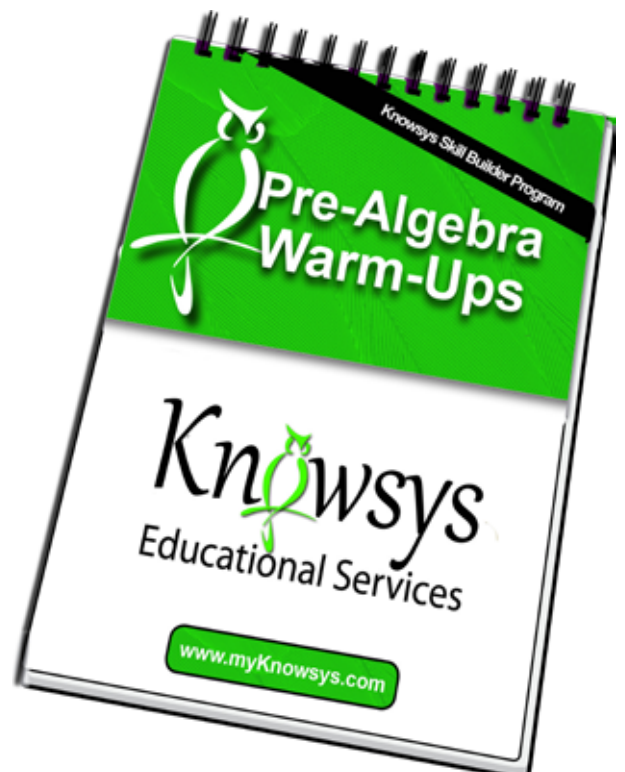


## SAT and ACT Math Edition

- Ideal as a cumulative review for the SAT
- Highest math contained is basic functions
- Contains:
  - \* **50 Pre-Algebra problems**  
Combinations, descriptive statistics, percents, permutations, ratios, and sequences
  - \* **50 Algebra problems**  
Equations, exponents, functions, quadratics, and roots
  - \* **50 Geometry problems**  
Circles, coordinate geometry, triangles, and lines and angles

## Pre-Algebra Edition

- Ideal for use in middle school
- Contains **150 Pre-Algebra Problems**:
  - \* Number Properties
  - \* Exponents and square roots
  - \* Ratios, proportions, & percents
  - \* Absolute value
  - \* Linear equations
  - \* Probability
  - \* Counting methods
  - \* Charts, tables, and graphs
  - \* Descriptive statistics



# Knowsys SAT & ACT Math

## Sample Pages

**Knowsys Math Warm-Ups**  
SAT-ACT

**Knowsys**  
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## Algebra

**Knowsys Math Warm-Ups**  
SAT-ACT

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#### Warm-Up #144

Given that  $a$  and  $b$  are positive integers and  $a > b$ , if  $24\sqrt{24} = a\sqrt{b}$  which of the following could be the value of  $\frac{a}{b}$ ?

- (A)  $\frac{1}{8}$   
(B) 1  
(C) 6  
(D) 8  
(E) 48

**Always simplify first:**

$$24\sqrt{24} = 48\sqrt{6}$$

**So  $a = 48$  and  $b = 6$**

$$\frac{a}{b} = \frac{48}{6} = 8$$

**Difficulty:**  
**Medium**

**Your answer:**  
**D**

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### Pricing Information

- Portable flip-top book (4.5" x 5.5")
- Student edition = \$10.00 + S&H  
*Minimum order quantities apply.*
- Teacher edition = \$13.00 + S&H

**Warm-Up #124**

The function  $f$  is defined by  $f(a) = 4(2a^3 - 4)$ .  
 When  $f(a) = -80$ , what is the value of  $3a$ ?

- (A) -6.9  
 (B) -6  
 (C) 4.6  
 (D) 5.2  
 (E) 6

$$-80 = 4(2a^3 - 4)$$

$$-20 = 2a^3 - 4$$

$$-16 = 2a^3$$

$$-8 = a^3$$

$$-2 = a$$

$$3a = 3(-2) = -6$$

**Difficulty:**  
**Medium**

**Your answer:**  
**B**

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# Algebra

# Pre-Algebra

## Pricing Information

- Portable flip-top book (4.5" x 5.5")
- Student edition = \$10.00 + S&H  
*Minimum order quantities apply.*
- Teacher edition = \$13.00 + S&H

**Warm-Up #74**

If  $x + 4y$  is equivalent to 120% of  $5y$ , what is the value  
 of  $\frac{x}{y}$ ?

**Translate and solve:**

$$x + 4y = 1.2(5y)$$

$$x + 4y = 6y$$

$$x = 2y$$

$$\frac{x}{y} = 2$$

**Difficulty:**  
**Hard**

**Your answer:**  
**2**

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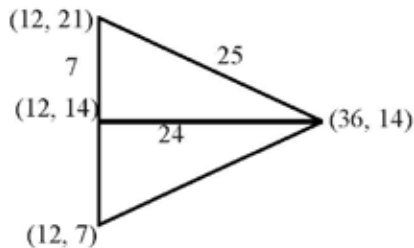
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**Warm-Up #113**

In the rectangular coordinate system, the distance between point  $M(36, 14)$  and point  $N(12, k)$  is 25. What is one possible value of  $k$ ?



From the numbers given, we know the distance between the 2 points is 25 and one side length is 24 (between the x coordinates of 12 and 36). So, we should recognize the 7-24-25 triangle and figure out the y-coordinates to give a distance of 7.

**Difficulty:**  
**Hard**
**Your answer:**  
**7 or 2**

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## Geometry Samples

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**Warm-Up #129**

In the  $xy$ -coordinate plane, line  $M$  has a  $y$ -intercept of 0 and is perpendicular to the line  $2y + 3x = 8$ . If the point  $(a, a + 3)$  lies on line  $M$ , what is the value of  $a$ ?

**Rearrange to find the slope:**

$$2y + 3x = 8$$

$$2y = -3x + 8$$

$$y = -\frac{3}{2}x + 4$$

(A) -9

(B) -3

(C)  $-\frac{1}{3}$ 
**Find the slope of line M:**

$$y = \frac{2}{3}x$$

(D) 3

**Plug in  $(a, a + 3)$  and solve for  $a$ :**

(E) 9

$$a + 3 = \frac{2a}{3}$$

$$3a + 9 = 2a$$

$$a = -9$$

**Difficulty:**  
**Medium**
**Your answer:**  
**A**

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