

Solutions Manual

**SAXON<sup>TM</sup> Math**  
**H O M E S C H O O L**

**8/7**

with Prealgebra

**Stephen Hake**

**John Saxon**

<b>Lessons and Investigations</b> .....	<b>1</b>
<b>Appendix Topic</b> .....	<b>315</b>
<b>Supplemental Practice</b> .....	<b>319</b>
<b>Facts Practice Tests</b> .....	<b>329</b>
<b>Tests</b> .....	<b>355</b>



**SAXON<sup>TM</sup>**  
**PUBLISHERS**

Saxon Publishers gratefully acknowledges the contributions of the following individuals in the completion of this project:

**Authors:** Stephen Hake, John Saxon

**Editorial:** Chris Braun, Matt Maloney, Brooke Butner, Brian E. Rice

**Editorial Support Services:** Christopher Davey, Jay Allman, Shelley Turner, Jean Van Vleck, Darlene Terry

**Production:** Alicia Britt, Karen Hammond, Donna Jarrel, Brenda Lopez, Adriana Maxwell, Cristi D. Whiddon

**Project Management:** Angela Johnson, Becky Cavnar

© 2005 Saxon Publishers, Inc., and Stephen Hake

All rights reserved. No part of *Saxon Math 8/7 with Prealgebra—Homeschool, Third Edition, Solutions Manual* may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Printed in the United States of America

ISBN: 1-59141-328-1

Manufacturing Code: 4 5 6 7 8 862 11 10 09

Used by Permission

$$\begin{array}{r}
 \$1.25 \\
 25. \quad 8 \overline{) \$10.00} \\
 \underline{\phantom{0}8} \\
 20 \\
 \underline{\phantom{0}16} \\
 40 \\
 \underline{\phantom{0}40} \\
 0
 \end{array}$$

- 26. Natural numbers
- 27. \$0.25; 25¢
- 28. All counting numbers are whole numbers.
- 29. Quotient
- 30. Minuend - subtrahend = difference

**LESSON 2, WARM-UP**

- a. 48
- b. 18
- c. 50
- d. 900
- e. 6000
- f. 600
- g. 0

**Problem Solving**

We can make five pairs of addends that each total 11.  
 $5 \times 11 = 55$

**LESSON 2, LESSON PRACTICE**

- a. The additive identity is zero. The multiplicative identity is 1.
- b. Division
- c.  $(x + y) + z = x + (y + z)$   
 Numerical answers may vary.

d. Commutative property of multiplication

- e.  $(5 + 4) + 3 = (9) + 3 = 12$
- f.  $5 + (4 + 3) = 5 + (7) = 12$
- g.  $(10 - 5) - 3 = (5) - 3 = 2$
- h.  $10 - (5 - 3) = 10 - (2) = 8$
- i.  $(6 \cdot 2) \cdot 5 = (12) \cdot 5 = 60$
- j.  $6 \cdot (2 \cdot 5) = 6 \cdot (10) = 60$
- k.  $(12 \div 6) \div 2 = (2) \div 2 = 1$
- l.  $12 \div (6 \div 2) = 12 \div (3) = 4$

m.  $k = n \cdot n$

Eighth term:  $k = 8 \cdot 8 = 64$

Ninth term:  $k = 9 \cdot 9 = 81$

Tenth term:  $k = 10 \cdot 10 = 100$

n. Each term in the sequence can be found by doubling the preceding term; 16, 32, 64.

o.  $k = (2n) - 1$

$k = (2 \cdot 1) - 1 = (2) - 1 = 1$

$k = (2 \cdot 2) - 1 = (4) - 1 = 3$

$k = (2 \cdot 3) - 1 = (6) - 1 = 5$

$k = (2 \cdot 4) - 1 = (8) - 1 = 7$

First four terms: 1, 3, 5, 7

**LESSON 2, MIXED PRACTICE**

- 1. Product of 2 and 3 = 6  
 Sum of 4 and 5 = 9  
 $9 - 6 = 3$
- 2. \$0.04; 4¢
- 3. 75¢ per glass; \$0.75 per glass
- 4. Subtraction

$$\begin{array}{r}
 15 \\
 5. \quad 4 \overline{) 60} \\
 \underline{\phantom{0}4} \\
 20 \\
 \underline{\phantom{0}20} \\
 0
 \end{array}$$

# SOLUTIONS

5. Addition, subtraction, multiplication, and division

6. (a)  $12 + 4 = 16$

(b)  $12 - 4 = 8$

(c)  $12 \cdot 4 = 48$

(d)  $\frac{12}{4} = 3$

7. 
$$\begin{array}{r} \phantom{\$} \overset{3}{4} \overset{6}{3} \overset{7}{7} \overset{1}{4} \\ - \phantom{\$} \overset{1}{1} \overset{6}{6} \overset{5}{5} \overset{9}{9} \\ \hline \phantom{\$} \overset{2}{2} \overset{7}{7} \overset{1}{1} \overset{5}{5} \end{array}$$

8. 
$$\begin{array}{r} 64 \\ \times 37 \\ \hline 448 \\ 192 \\ \hline 2368 \end{array}$$

9. 
$$\begin{array}{r} 7 \\ 8 \\ 4 \\ 6 \\ 9 \\ 3 \\ 5 \\ + 7 \\ \hline 49 \end{array}$$

10. 
$$\begin{array}{r} \phantom{\$} \overset{12}{364} \\ \phantom{\$} \phantom{0} \overset{52}{52} \\ \phantom{\$} \phantom{0} \overset{867}{867} \\ + \phantom{\$} \phantom{0} \phantom{0} \overset{9}{9} \\ \hline \phantom{\$} \overset{1292}{1292} \end{array}$$

11. 
$$\begin{array}{r} \phantom{\$} \overset{3}{4} \overset{9}{0} \overset{9}{0} \overset{10}{0} \\ - \phantom{\$} \overset{3}{3} \overset{6}{6} \overset{2}{2} \overset{5}{5} \\ \hline \phantom{\$} \overset{3}{3} \overset{7}{7} \overset{5}{5} \end{array}$$

12. 
$$\begin{array}{r} 316 \\ \times 18 \\ \hline 2528 \\ 316 \\ \hline 5688 \end{array}$$

13. 
$$\begin{array}{r} \phantom{\$} \overset{2.18}{20} \overline{) \$43.60} \\ \phantom{\$} \overset{40}{40} \\ \phantom{\$} \phantom{0} \overset{36}{36} \\ \phantom{\$} \phantom{0} \overset{20}{20} \\ \phantom{\$} \phantom{0} \overset{160}{160} \\ \phantom{\$} \phantom{0} \overset{160}{160} \\ \phantom{\$} \phantom{0} \overset{0}{0} \end{array}$$

14. 
$$\begin{array}{r} 300 \\ \times 40 \\ \hline 12,000 \end{array}$$

15. 
$$\begin{array}{r} 12 \\ \times 8 \\ \hline 96 \end{array} \quad \begin{array}{r} 96 \\ \times 0 \\ \hline 0 \end{array}$$

16. 
$$\begin{array}{r} \phantom{12} \overset{309}{3708} \\ \phantom{12} \overset{36}{36} \\ \phantom{12} \phantom{0} \overset{108}{108} \\ \phantom{12} \phantom{0} \overset{108}{108} \\ \phantom{12} \phantom{0} \overset{0}{0} \end{array}$$

17. 
$$\begin{array}{r} 365 \\ \times 20 \\ \hline 7300 \end{array}$$

18. 
$$\begin{array}{r} \phantom{25} \overset{30}{767} \text{ R } 17 \\ \phantom{25} \overset{75}{75} \\ \phantom{25} \phantom{0} \overset{17}{17} \\ \phantom{25} \phantom{0} \overset{0}{0} \\ \phantom{25} \phantom{0} \overset{17}{17} \end{array}$$

19. 
$$\begin{array}{r} 30 \\ \times 40 \\ \hline 1200 \end{array}$$

20. 
$$\begin{array}{r} \phantom{\$} \overset{0}{4} \overset{9}{0} \overset{9}{0} \overset{10}{0} \\ - \phantom{\$} \overset{2}{2} \overset{3}{3} \overset{4}{4} \\ \hline \phantom{\$} \overset{7}{7} \overset{6}{6} \overset{6}{6} \end{array}$$

21. 
$$\begin{array}{r} \phantom{\$} \overset{3}{4} \overset{9}{0} \overset{1}{1} \overset{7}{7} \\ - \phantom{\$} \overset{3}{3} \overset{9}{9} \overset{5}{5} \overset{2}{2} \\ \hline \phantom{\$} \overset{6}{6} \overset{5}{5} \end{array}$$

22. 
$$\begin{array}{r} \$2.50 \\ \times 80 \\ \hline \$200.00 \end{array}$$

23. 
$$\begin{array}{r} \$2.50 \\ \times 20 \\ \hline \$50.00 \end{array}$$

24. 
$$\begin{array}{r} \phantom{14} \overset{40}{560} \\ \phantom{14} \overset{56}{56} \\ \phantom{14} \phantom{0} \overset{0}{0} \\ \phantom{14} \phantom{0} \overset{0}{0} \\ \phantom{14} \phantom{0} \overset{0}{0} \end{array}$$