Test Forms

Algebra $\frac{1}{2}$

An Incremental Development

THIRD EDITION

SAXON

Homeschool Packet

for

Algebra $\frac{1}{2}$

Third Edition

Test Forms

Instructions

Tests are an important component of the Saxon program. We believe that concepts and skills should be continually tested. However, tests should only be administered after the concepts and skills have been thoroughly practiced. Each test specifies when that particular test is to be given to the student. A schedule is also included on the back side of this page.

Note: Optional student answer forms are located at the back of this booklet. These forms provide sufficient writing space so that the student can show all of his/her work along with his/her answers. Answer forms may be copied as often as necessary to complete the course.

Algebra $\frac{1}{2}$

Testing Schedule

Test to be administered:	Covers material up through:	Give after teaching:
Test 1	Lesson 4	Lesson 8
Test 2	Lesson 8	Lesson 12
Test 3	Lesson 12	Lesson 16
Test 4	Lesson 16	Lesson 20
Test 5	Lesson 20	Lesson 24
Test 6	Lesson 24	Lesson 28
Test 7	Lesson 28	Lesson 32
Test 8	Lesson 32	Lesson 36
Test 9	Lesson 36	Lesson 40
Test 10	Lesson 40	Lesson 44
Test 11	Lesson 44	Lesson 48
Test 12	Lesson 48	Lesson 52
Test 13	Lesson 52	Lesson 56
Test 14	Lesson 56	Lesson 60
Test 15	Lesson 60	Lesson 64
Test 16	Lesson 64	Lesson 68
Test 17	Lesson 68	Lesson 72
Test 18	Lesson 72	Lesson 76
Test 19	Lesson 76	Lesson 80
Test 20	Lesson 80	Lesson 84
Test 21	Lesson 84	Lesson 88
Test 22	Lesson 88	Lesson 92
Test 23	Lesson 92	Lesson 96
Test 24	Lesson 96	Lesson 100
Test 25	Lesson 100	Lesson 104
Test 26	Lesson 104	Lesson 108
Test 27	Lesson 108	Lesson 112
Test 28	Lesson 112	Lesson 116
Test 29	Lesson 116	Lesson 120
Test 30	Lesson 120	Lesson 123
Test 31	Lesson 123	Lesson 123

1. Subtract: 737
                $- \ 668$

2. Add: 81,104
           20,229
        $+ \ 18,284$

Multiply:

3. 273×87

4. $26 \cdot 3 \cdot 64$

Divide:

5. $\dfrac{\$30.10}{7}$

6. $\dfrac{\$21.55}{5}$

7. $\dfrac{\$19.39}{7}$

Multiply:

8. 274×47

9. $81 \cdot 6 \cdot 15$

Find the missing number:

10. $B \cdot 16 = 192$

11. $W - 197 = 365$

12. $917 - E = 540$

13. $B + 219 = 370$

14. $\dfrac{90}{W} = 9$

15. A number has nine digits. All the digits are 1 except the millions' digit, which is 5, the ten-thousands' digit, which is 2, and the tens' digit, which is 7. Use digits to write the number.

16. Use words to write the number 10134519.

17. Write the number 6,203,649 in expanded notation.

18. Write the following number in standard notation:

$$(2 \times 10,000) + (3 \times 1000) + (5 \times 100) + (5 \times 10) + (3 \times 1)$$

19. Round 23,372,931 to the nearest hundred thousand.

20. Arrange the following numbers in order from least to greatest:

$$-361, -80, 139, 44, -134, 229$$

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Test 2   **SHOW YOUR WORK**   Name: _____

1. When Hewitt finished reading 142 pages of a 249-page book, he still had how many pages to read?

2. There were 626 runners preregistered for a race. More runners signed up the day of the race. There were 784 runners in the race. How many runners signed up the day of the race?

3. Arrange these decimal numbers in order from least to greatest: 0.36, 0.075, 0.358, 0.0761

4. Multiply: 27,975.215 × 100

5. Divide: 42.19 ÷ 100

Find the missing number:

6. $F - 212 = 277$

7. $12 \times K = 204$

8. Round 42,548,111 to the nearest hundred thousand.

9. Round 8663.6630002 to the nearest thousandth.

10. Use digits and a decimal point to write these numbers:

    (a) thirty-nine and seventy-two hundredths

    (b) one hundred eighty-two and four hundred fourteen thousandths

11. Use words to write these numbers:

    (a) 114.674

    (b) 2,609,252.64081

12. Find the missing number: $\dfrac{U}{10.8} = 6$

13. Multiply: 8.85 × 80.3

Divide, and then round the answer to two decimal places:

14. 0.04855 ÷ 0.971

15. 0.147696 ÷ 0.724

16. Subtract: 831.5 − 47.79

17. Add: 9.411 + 0.455

18. Find the missing number: $558.24 - E = 541.6$

Estimate and then evaluate:

19. 6.84 × 0.52

20. 28 × 0.37

     Algebra ½, Third Edition

Test 3   **SHOW YOUR WORK**   Name: _____

1. There were 888 runners preregistered for a race. More runners signed up the day of the race. There were 1216 runners in the race. How many runners signed up the day of the race?

2. A price was reduced six thousand, six hundred seventy-three dollars. The final price was nine thousand, four hundred forty-five dollars. What was the original price?

3. Divide: $91.49 \div 100$ 4. Multiply: $24,935.644 \times 100$

5. (a) How many degrees are in a right angle?
   (b) How many degrees are in a straight angle?

6. Linden received a shipment of 12 boxes of wind chimes. Each box contained 19 wind chimes. How many wind chimes were in the shipment?

7. What is an acute angle?

8. Find the perimeter of this figure. Dimensions are in yards. All angles are right angles.
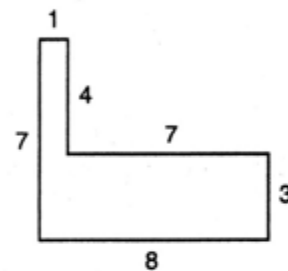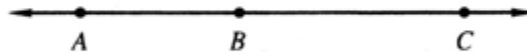

Divide, and then round the answer to two decimal places:

9. $0.105123 \div 0.201$ 10. $0.765351 \div 0.921$

11. In this figure, $AB = 4.06$ units and $AC = 9.79$ units. Find BC.

12. Round 7861.8625358 to the nearest hundred-thousandth.

13. Round 1981.9807363 to the nearest thousandth.

14. Find the sum of the prime numbers between 51 and 69.

15. Use words to write these numbers:
    (a) 142.138   (b) 1,658,694.12987

Find the missing number:

16. $\dfrac{G}{14.1} = 6$ 17. $163.36 - Q = 133.64$

18. Which of the following numbers are divisible by: (a) 5?   (b) 2?   (c) 10?   (d) 3?

     2   45   36   35   9530   26,981

19. Write 540 as a product of prime numbers.

20. On the day of the big game, 1039 fans waited for buses to the stadium. If each bus could hold 87 fans, how many buses were needed to take all the fans to the stadium?

*Algebra ½, **Third Edition***

SHOW YOUR WORK   Name: _____

1. Andy used 7872 nails to do the first roof. He used 7 times as many nails to do the second roof. How many nails did Andy use to do both roofs?

2. Linden received a shipment of 17 boxes of wind chimes. Each box contained 15 wind chimes. How many wind chimes were in the shipment?

3. Ward 9 reported 6 times as many votes as Ward 5 reported. Ward 8 reported 7 times as many votes as Ward 5. If Ward 5 reported 6933 votes, how many votes did the three wards report in all?

4. A price was reduced three thousand, one hundred fifty-two dollars. The final price was eight thousand, two hundred seventy-five dollars. What was the original price?

5. Ward 9 reported 9 times as many votes as Ward 2 reported. Ward 5 reported 4 times as many votes as Ward 2 reported. If Ward 2 reported 5882 votes, how many votes did the three wards report in all?

6. Divide: $41.63 \div 1000$

7. Write 108 as a product of prime numbers.

8. Multiply: 8.57×33.5

9. Write 4900 as a product of prime numbers.

10. Find the missing number: $13 \cdot Q = 679.9$

11. Find the perimeter of this figure. Dimensions are in feet. All angles are right angles.
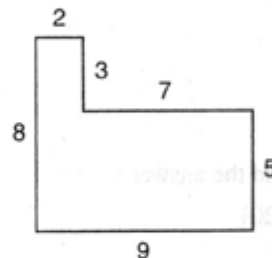
12. Reduce $\dfrac{25}{75}$ to lowest terms.

13. Reduce $\dfrac{44}{132}$ to lowest terms.

14. Round $62.\overline{27}$ to the nearest ten-thousandth.

15. Write each fraction as a decimal number:

    (a) $\dfrac{1}{5}$ (b) $\dfrac{2}{5}$

16. Write each fraction as a decimal number:

    (a) $\dfrac{7}{25}$ (b) $\dfrac{2}{5}$

17. Write 1782 as the product of prime numbers using exponents.

18. Which of the following numbers are divisible by: (a) 5?   (b) 2?   (c) 10?   (d) 3?

    2   24   55   96   1207   5450

19. Write each number as a fraction with a denominator of 72:

    (a) $\dfrac{5}{9}$ (b) $\dfrac{1}{4}$

20. Write 0.72 as a fraction.

Algebra $\frac{1}{2}$, Third Edition

Test 5   **SHOW YOUR WORK**   Name: _____

1. Which of the following numbers are divisible by: (a) 5?   (b) 2?   (c) 10?   (d) 3?

   4   33   85   88   3552   66,510

2. Add: 27
          70
          76
        + 23

3. On the day of the big game, 3874 fans waited for buses to the stadium. If each bus could hold 61 fans, how many buses were needed to take all the fans to the stadium?

4. List the first three common multiples of 31, 18, and 20.

5. List all prime numbers between 53 and 74.

6. Find the perimeter of this figure. Dimensions are in feet. All angles are right angles.

7. How many 1-yard-square tiles would it take to cover this rectangle? Dimensions are in yards.
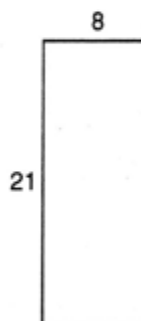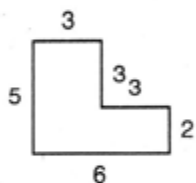
8. Write each fraction as a decimal number:

   (a) $\frac{3}{8}$ (b) $\frac{2}{5}$

9. Write each fraction as a decimal number:

   (a) $\frac{13}{20}$ (b) $\frac{4}{5}$

10. Find GCF (30, 75).

11. List the first three common multiples of 19, 6, and 38.

12. Find $\frac{4}{5}$ of 85.

13. Subtract: $608.5 - 95.74$

14. Divide: $17 \div 8$

15. Round $25.\overline{481}$ to the nearest hundred-thousandth.

16. Evaluate the following exponential expressions: (a) $(0.2)^2$ (b) 6^3 (c) 1^{12}

17. Write 1800 as a product of prime numbers.

18. Reduce $\frac{140}{196}$ to lowest terms.

19. Reduce $\frac{96}{160}$ to lowest terms.

20. Simplify: $\frac{44}{39} \div \frac{55}{13}$

Algebra $\frac{1}{2}$, Third Edition

1. When Howell finished reading 136 pages of a 276-page book, he still had how many pages to read?

2. Which of the following numbers are divisible by: (a) 5?   (b) 2?   (c) 10?   (d) 3?

    2   39   95   23   3180   5296

3. Find GCF (36, 88).

4. Round $31.8\overline{14}$ to the nearest ten-thousandth.

5. Find the average of 4943, 941, 74, and 24,912.

6. Use a unit multiplier to convert 9 feet to inches.

Simplify:

7. $\dfrac{10}{30} \times \dfrac{5}{2} \div \dfrac{4}{6}$

8. $\dfrac{28}{24} \times \dfrac{4}{7} \div \dfrac{2}{6}$

9. $\left(\dfrac{3}{5}\right)^2$

10. Evaluate the following exponential expressions: (a) $(0.3)^2$ (b) 4^4 (c) 1^{14}

11. Reduce $\dfrac{105}{126}$ to lowest terms.

12. Write each fraction as a decimal number:

    (a) $\dfrac{3}{5}$

    (b) $\dfrac{1}{5}$

13. Round 4387.3888306 to the nearest ten-thousandth.

14. Use a unit multiplier to convert 532 centimeters to meters.

15. Find the missing number: $381.44 - D = 373.79$

16. Subtract: $879.1 - 37.39$

17. Divide: $1.17 \div 0.06$

18. Find $\dfrac{5}{12}$ of 60.

19. List all prime numbers between 39 and 55.

20. Find all the multiples of 5 that are greater than 20 and less than 50.

Algebra $\frac{1}{2}$, Third Edition

1. Renée used 7652 nails to do the first roof. She used 8 times as many nails to do the second roof. How many nails did Renée use to do both roofs?

2. List all prime numbers between 64 and 83.

3. A high school English instructor returned graded essays to 9 students in a sophomore English class. The students had the following scores: 49, 75, 45, 72, 67, 70, 66, 75, 75. Find the (a) range, (b) mode, (c) median, and (d) mean of this set of scores. Round any decimal results to two decimal places.

4. At seven different restaurants Rachel found that house salads cost an average of $3.80. If six of the restaurants priced house salads at $3.00, $3.45, $4.15, $4.60, $4.65, and $2.80, how much did a house salad cost at the other restaurant?

5. On the day of the big game, 4185 fans waited for buses to the stadium. If each bus could hold 67 fans, how many buses were needed to take all the fans to the stadium?

Use unit multipliers to convert:

6. 481 centimeters to meters

7. 41,184 feet to miles

Simplify:

8. $\dfrac{24}{30} \times \dfrac{6}{4} \div \dfrac{3}{5}$

9. $\dfrac{20}{24} \times \dfrac{4}{5} \div \dfrac{3}{6}$

10. Multiply: 4.48×23.5

11. Reduce $\dfrac{26}{104}$ to lowest terms.

12. Use a unit multiplier to convert 648 centimeters to meters.

13. Write each fraction as a decimal number:
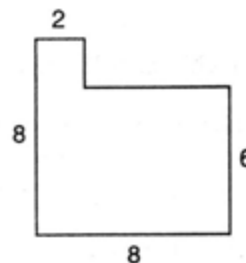
   (a) $\dfrac{13}{20}$

   (b) $\dfrac{4}{5}$

14. Find LCM (33, 39, 52).

15. What number is $\dfrac{1}{5}$ of 48?

16. Write 2268 as the product of prime numbers using exponents.

17. Write 4.22 as a mixed number.

18. Use the difference of areas to find the area of this figure. Dimensions are in inches. All angles are right angles.

19. Convert the following mixed numbers to decimal numbers.

   (a) $4\dfrac{17}{20}$

   (b) $8\dfrac{2}{5}$

20. Find the area of this figure. Dimensions are in centimeters. All angles that look like right angles are right angles.

Algebra $\frac{1}{2}$, **Third Edition**

Test 8   **SHOW YOUR WORK**   Name: _____
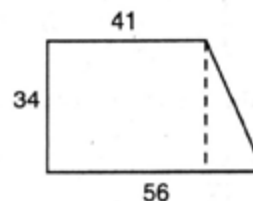
1. When Hewitt finished reading 111 pages of a 239-page book, he still had how many pages to read?

2. Use digits and a decimal point to write these numbers:
   (a) twenty-one and seventy-three hundredths
   (b) one hundred seventy-nine and two hundred eighty-two thousandths

3. On the day of the big game, 1295 fans waited for buses to the stadium. If each bus could hold 81 fans, how many buses were needed to take all the fans to the stadium?

4. A high school English instructor returned graded essays to 8 students in a sophomore English class. The students had the following scores: 61, 45, 48, 71, 45, 45, 45, 56. Find the (a) range, (b) mode, (c) median, and (d) mean of this set of scores. Round any decimal results to two decimal places.

5. Ward 6 reported 4 times as many votes as Ward 8 reported. Ward 9 reported 6 times as many votes as Ward 8 reported. If Ward 8 reported 9216 votes, how many votes did the three wards report in all?

Evaluate:

6. $xy + x$ if $x = 2$ and $y = 3$

7. $xy - y$ if $x = 5$ and $y = 2$

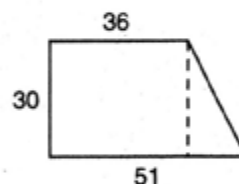8. Convert the following improper fractions to mixed numbers:

   (a) $\dfrac{6}{5}$ (b) $\dfrac{15}{2}$ (c) $\dfrac{18}{4}$

9. Find $\dfrac{7}{11}$ of 77.

10. Find the area of this figure. Dimensions are in centimeters. All angles that look like right angles are right angles.

11. List all prime numbers between 5 and 30.

12. Convert the following mixed numbers to decimal numbers:

   (a) $4\dfrac{5}{8}$ (b) $20\dfrac{1}{5}$

13. Find all the multiples of 15 that are greater than 30 and less than 70.

14. The numbers of overcast days for the months of January through May were reported as follows: January, 14; February, 19; March, 22; April, 6; and May, 10. Create a bar graph and a broken-line graph to present this information.

15. Convert the following mixed numbers to improper fractions:

   (a) $5\dfrac{4}{5}$ (b) $6\dfrac{2}{7}$ (c) $1\dfrac{3}{62}$

16. Simplify: $\dfrac{1}{6} + \dfrac{1}{4} - \dfrac{1}{3}$

17. $48 - 2 \cdot 5 + 7 \cdot 4$

18. Evaluate the following exponential expressions: (a) $(0.2)^2$ (b) 3^4 (c) 1^{15}

19. Simplify: $\dfrac{54}{10} \cdot \dfrac{20}{9} \cdot \dfrac{2}{28}$

20. Find LCM (10, 22, 99).

Algebra ½, Third Edition

1. On the day of the big game, 1577 fans waited for buses to the stadium. If each bus could hold 96 fans, how many buses were needed to take all the fans to the stadium?

2. A high school English instructor returned graded essays to 8 students in a sophomore English class. The students had the following scores : 65, 55, 40, 59, 65, 55, 70, 55. Find the (a) range, (b) mode, (c) median, and (d) mean of this set of scores. Round any decimal results to two decimal places.

3. Adrienne averaged 21 points per game. Write the two rates (ratios) implied by this statement. How many points would she score if she played 25 games and maintained this average?

4. What number is $\dfrac{4}{15}$ of 49?

5. Convert the following improper fractions to mixed numbers:

   (a) $\dfrac{22}{9}$ (b) $\dfrac{15}{8}$ (c) $\dfrac{14}{8}$

6. List all prime numbers between 62 and 77.

7. Find all the multiples of 8 that are greater than 30 and less than 60.

8. Add: $6\dfrac{1}{2} + 6\dfrac{3}{4} + 6\dfrac{1}{3}$

9. Subtract: $7\dfrac{5}{8} - 6\dfrac{1}{4}$

10. Add: $4\dfrac{1}{2} + 3\dfrac{5}{8} + 2\dfrac{7}{12}$

11. Subtract: $9\dfrac{2}{3} - 4\dfrac{3}{5}$

12. Simplify: $36 - 4 \cdot 3 + 5 \cdot 4$

13. Divide: $1.296 \div 0.08$

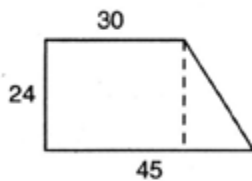Simplify:

14. $\dfrac{4}{5} - \dfrac{1}{3}$

15. $\dfrac{10}{20} \times \dfrac{5}{2} \div \dfrac{6}{4}$

16. Use two unit multipliers to convert 58 inches to yards.

17. Evaluate: $xy + x$ if $x = 8$ and $y = 3$

18. Find the area of this figure. Dimensions are in units. All angles that look like right angles are right angles.

19. Use a unit multiplier to convert 315 centimeters to meters.

20. Find the perimeter of this figure. Dimensions are in yards. All angles are right angles.

     *Algebra $\frac{1}{2}$, **Third Edition***

Test 10   **SHOW YOUR WORK**   Name: _____
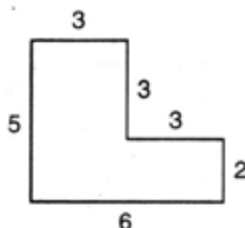
1. Adrienne averaged 11 points per game. Write the two rates (ratios) implied by this statement. How many points would she score if she played 19 games and maintained this average?

2. Before Romeo climbed the rose trellis to the balcony, he and Juliet estimated the height of the balcony above the ground. Romeo's estimate was 5.801 meters, and Juliet's estimate was 5.409 meters. What was the mean of the two estimates?

3. What number is $\frac{1}{6}$ of 45?

4. The numbers of overcast days for the months of January through May were reported as follows: January, 24; February, 17; March, 22; April, 29; and May, 12. Create a bar graph and a broken-line graph to present this information.

5. Convert the following improper fractions to mixed numbers:

   (a) $\frac{8}{5}$ (b) $\frac{19}{6}$ (c) $\frac{8}{6}$

6. Find LCM (14, 22, 297).

7. Simplify: $50 - 5 \cdot 3 + 5 \cdot 4$ 8. Add: $1\frac{1}{2} + 3\frac{1}{6} + 1\frac{3}{4}$

9. Add: $3\frac{2}{3} + 4\frac{4}{9} + 5\frac{5}{6}$ 10. Subtract: $5\frac{5}{9} - 4\frac{3}{8}$

11. Multiply: 4.37×57.7 12. Subtract: $775.8 - 98.95$

13. Use two unit multipliers to convert 26 kilometers to centimeters.

14. Graph the following points: (a) (1, 3)   (b) (–7, 2)   (c) (–9, –4)

15. Evaluate: $2g - fg$ if $f = \frac{5}{6}$ and $g = \frac{3}{5}$

Solve:
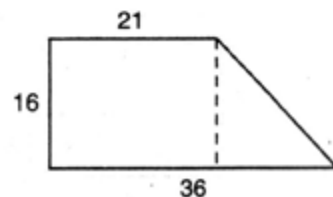
16. $q + \frac{7}{15} = \frac{4}{5}$ 17. $\frac{5}{6}x = \frac{1}{2}$

18. $6y = 66$ 19. $n + 2 = 13$

20. Find the area of this figure. Dimensions are in inches. All angles that look like right angles are right angles.

Algebra $\frac{1}{2}$, Third Edition

Test 11   **SHOW YOUR WORK**   Name: _____

1. Twenty-six kilograms of tea cost 234 dollars. How much tea could you buy for 414 dollars?

2. Ward 1 reported 5 times as many votes as Ward 3 reported. Ward 8 reported 9 times as many votes as Ward 3 reported. If Ward 3 reported 5155 votes, how many votes did the three wards report in all?

3. The average of the first 4 numbers was 15. The average of the next 6 numbers was 25. What was the overall average of the 10 numbers?

4. Graph the following points: (a) $(2, 4)$ (b) $(-8, 3)$ (c) $(-6, -7)$

5. Find LCM $(14, 26, 351)$.

Solve:

6. $z + \dfrac{1}{8} = \dfrac{1}{4}$

7. $\dfrac{5}{7}k = \dfrac{5}{9}$

8. $4y = 40$

9. Evaluate: $xy + x$ if $x = 3$ and $y = 5$

10. Simplify: $4 \cdot 4 + 15 - 6 \div 2 + 3(9 - 6)$

11. Subtract: $8\dfrac{2}{7} - 5\dfrac{1}{3}$

Simplify:

12. $3\dfrac{3}{4} \times 2\dfrac{2}{3} \times 2\dfrac{1}{7}$

13. $1\dfrac{1}{7} \div 1\dfrac{1}{5} \cdot 1\dfrac{3}{4} \div 2\dfrac{1}{3}$

14. $13 - \sqrt[3]{27} + 9 \cdot 3^4 - (5 + 1 - 3) \div 3$

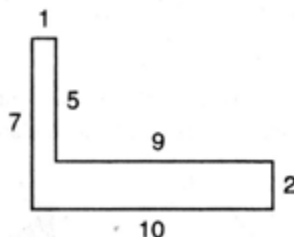15. (a) $\sqrt[3]{729}$ (b) $\sqrt{256}$

16. Multiply: 1.76×26.8

Simplify:

17. $3[(11 - 4)(15 - 11) + 7] - 9$

18. $38 - 7 \cdot 2 + 7 \cdot 3$

19. Find the perimeter of this figure. Dimensions are in inches. All angles are right angles.

20. Use a unit multiplier to convert 817 centimeters to meters.

Algebra ½, Third Edition

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