# A KEY TO THE COMMON SCHOOL ALGEBRA

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A Key to the Common School Algebra by Thomas Sherwin

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THOMAS SHERWIN

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# COMMON SCHOOL ALGEBRA.

BY

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# KEY

TO THE

# COMMON SCHOOL ALGEBRA.

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## PRELIMINARY EXERCISES.

ART. 4. 1. Performed.

2. $4x$, $6x$, $9x$, $11x$.

3. $3x$, $5x$, $7x$, $10x$, $15x$, $30x$.

4. $2x$, $7x$, $9x$, $18x$, $20x$.

5. $4x$, $6x$, $8x$, $10x$, $12x$, $14x$, $16x$, $18x$, $20x$.

6. $6x$, $15x$, $18x$, $24x$, $30x$, $36x$.

7. $12x$, $24x$, $48x$, $52x$.

8. $10x$, $15x$, $20x$, $35x$, $45x$, $75x$.

9. Performed.

10. $9x$, $18x$, $27x$, $36x$, $45x$, $54x$.

11. $10x$, $20x$, $30x$, $50x$, $70x$, $110x$.

12. $6x$, $9x$, $12x$, $15x$, $18x$.

13. $10x$, $12x$, $14x$, $16x$, $18x$, $20x$.

14. $6x$, $12x$, $20x$, $42x$, $56x$.

15. $3x$, $8x$, $30x$.

16. $12x$, $18x$, $24x$, $30x$, $36x$, $42x$; and $30x$, $50x$, $70x$, $110x$, $130x$.

17. $14x$, $24x$, $50x$, $72x$.

18. $4x$, $10x$, $18x$, $63x$, shillings.

19. $10x$.

20. $8x$. $30x$.

ART. 5. 1. Performed.
2. $3x+4x$.
3. $x+2x+3x$.
4. $3x+4x+5x+6x$.
5. $2x+3x$.
6. $4x+6x+8x$.
7. $15x+54x$.
8. $x+3x+4x$.
9. $9x+12x+15x$.
10. $x+2x+4x$.
11. $6x+3x+x$.
12. $x+2x+6x+8x$.
13. $x+y$.
14. $3x+7y$.
15. $21x+10y$.
16. $x+y+2x+3y$.
17. $3x+4x$.
18. $2x+2y$, $3x+3y$, $5x+5y$, $7x+7y$.

ART. 6. 1. Performed.
2. $5x$.
3. Performed.
4. $2x$, $4x$, $6x$, $8x$, $10x$, $12x$, $14x$, $16x$, $18x$.
5. $3x$, $6x$, $9x$, $15x$, $18x$, $21x$, $24x$, $27x$, $30x$, $36x$.
6. $15x$, $21x$, $27x$, $33x$, $60x$.
7. $18x$, $24x$, $26x$, $30x$, $34x$.
8. $36x$, $45x$, $51x$, $72x$, $144x$.
9. $72x$, $96x$, $120x$, $144x$, $156x$.
10. $2x$, $6x$, $10x$, $14x$.
11. $3x$, $5x$, $7x$, $9x$, $10x$, $12x$.
12. $3x$, $6x$, $9x$, $12x$, $15x$, $18x$, $21x$.
13. $4x$, $12x$, $20x$, $28x$, $32x$, $36x$.
14. $2x+2x$, $8x+4x$, $12x+10x$, $18x+28x$.
15. $6x+10x$, $16x+14x$, $34x+40x$.

16. $3x+12z$, $9x+14z$.

17. $2x+2y$, $4x+4y$, $6x+6y$, $8x+8y$, $10x+10y$.

ART. 7. 1st and 2d, performed.

3. $x+12$.

4. $2x+4$.

5. Performed.

6. $x+3$, $x+3+3$, $x+3+3+3$.

7. Black, $x+4$; blue, $x+4+5$.

8. B, $x-2$; C, $x-3$.

9. B's, $x+10$; A's, $x+10+5$.

10. $2x+100$.

11. B's, $3x$; A's, $6x+4$.

12. B's, $2x$; C's, $4x+2$.

13. $3x+5$ cows; $x+3x+5$ sheep; aggregate, $x+3x+5+x+3x+5$.

14. $6x+4$; $12x+7$; $15x+10$.

15. $2x+3$; $3x+10$; $4x+7$.

16. $x+2$; $3x+4$; $6x+9$; $7x+10$.

17. $x+x+4+x+4+2$.

18. B, $x+4$; C, $x+4+5$.

19. $x+100+2x+150+3x+70$.

ART. 8. 1. Performed.

2. $x-10$.

3. $x-4$.

4. Performed.

5. $150-x$.

6. $20-x$.

7. $50-x$.

8. $2x-4$.

9. $2x-12$.

10. $50-x$.

11. $500-3x$.
12. Performed.
13. A's, $3x+10$; B's, $2y-10$.
14. $100-2x$, larger; $75+2x$, smaller.
15. A, $50-x$; B, $50-3x$.
16. $x-4$ turkeys; $y+15$ geese.
17. Husband's, $2x-5$; wife's, $x-5$.

ART. **9.** 1. $x$; $x$; $x$; $2x$.
2. $x+6$; $x-6$; $2x-4$; $2x-4$; $5x+2$; $5x-2$.
3. $4x-3$; $7x+6$; $12x-5$.
4. $9x+5$; $10x+6$; $8x-3$; $11-6x$; $13-8x$.
5th, 6th, and 7th, performed.
8. $14x-24$.
9. $3x+10$.
10. $3x-10$.
11. $3x-15$.
12. $6x-10$.

ART. **10.** 1st and 2d, performed.
3. $10x+10$.
4. $285-x$.
5. $40x+25$; $140-21x$; $27x+9y-45$.
6. A's, $2x+14$; B's, $4x-4$; amount, $6x+10$.
7. A's, $8x-5$; B's, $4x+5$; joint stock, $12x$.
8. $32x-186$.
9. $16x-15000$.
10. $425+x$.

ART. **11.** 1. $x+2$.
2. $x+5$; $x-6$.
3. $x-3$.
4. A, $2x-25$; B, $2x+125$.
5. Performed.

6. $x+5$; $7x+35$.
7. $x-5$.
8. $x+15$.

ART. **12.** 1. Performed.

2. $\frac{x}{2}$; $\frac{x}{3}$; $\frac{x}{8}$.

3. Performed.

4. $\frac{2x}{3}$.

5. $x+\frac{x}{2}+5$.

6. $\frac{x}{3}+\frac{x}{2}-5$.

7. $\frac{3x}{4}-5$; $\frac{3x}{4}+10$.

ART. **13.** 1. Performed.

2. $\frac{3x-4}{2}$.

3. $\frac{10-x}{3}$.

4. $\frac{x+y-10}{4}$.

5. $\frac{x-2y+5}{5}$.

6. $\frac{2x+5}{2}$

7. A, $\frac{x-5}{2}$; B, $\frac{x+5}{2}$.

8. $\frac{2x-20}{3}$.

9. Performed.

10. $\frac{x+100}{5}-6$.