

READY, SET, GO!

Name _____

Period _____

Date _____

READY

Topic: Comparing arithmetic and geometric sequences

The first and fifth terms of each sequence are given. Fill in the missing numbers.

Example:

Arithmetic	4	84	164	244	324
Geometric	4	12	36	108	324

Diagram illustrating the sequences with arrows and labels:

- Arithmetic sequence: $4 \xrightarrow{+80} 84 \xrightarrow{+80} 164 \xrightarrow{+80} 244 \xrightarrow{+80} 324$
- Geometric sequence: $4 \xrightarrow{\times 3} 12 \xrightarrow{\times 3} 36 \xrightarrow{\times 3} 108 \xrightarrow{\times 3} 324$

1.

Arithmetic	3				1875
Geometric	3				1875

2.

Arithmetic	-1458				-18
Geometric	-1458				-18

3.

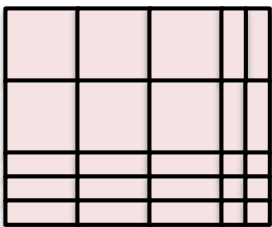
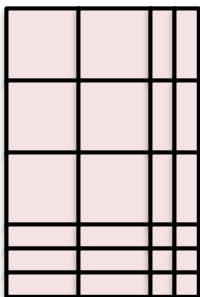
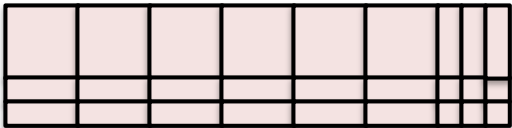
Arithmetic	1024				4
Geometric	1024				4

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SET

Topic: Writing an area model as a quadratic expression

Write two equivalent expressions for the area of each block. Let x be the side length of each of the large squares.

<p>4.</p> 	<p>5.</p> 
<p>6.</p> 	
<p>7. Problems 4, 5, and 6 all contain the same number of squares measuring x^2 and 1^2.</p> <p>A. What is different about them?</p> <p>B. How does this difference affect the quadratic expression that represents them?</p> <p>C. Describe how the arrangement of the squares and rectangles affects the factored form.</p>	

Topic: Factoring quadratic expressions when $a > 1$
Factor the following quadratic expressions.

8. $4x^2 + 7x - 2$

9. $2x^2 - 7x - 15$

10. $6x^2 + 7x - 3$

11. $4x^2 - x - 3$

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12. $4x^2 + 19x - 5$

13. $3x^2 - 10x + 8$

14. $6x^2 + x - 2$

15. $3x^2 - 14x - 24$

16. $2x^2 + 9x + 10$

17. $5x^2 + 31x + 6$

18. $5x^2 + 7x - 6$

19. $4x^2 + 8x - 5$

20. $3x^2 - 75$

21. $3x^2 + 7x + 2$

22. $4x^2 + 8x - 5$

23. $2x^2 + x - 6$

GO

Topic: Finding the equation of the line of symmetry of a parabola

Given the x-intercepts of a parabola, write the equation of the line of symmetry.

24. x-intercepts: $(-3, 0)$ and $(3, 0)$

25. x-intercepts: $(-4, 0)$ and $(16, 0)$

26. x-intercepts: $(-2, 0)$ and $(5, 0)$

27. x-intercepts: $(-14, 0)$ and $(-3, 0)$

28. x-intercepts: $(17, 0)$ and $(33, 0)$

29. x-intercepts: $(-0.75, 0)$ and $(2.25, 0)$

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