Name:_____   Date:_____
Algebra 1   Band:_____

Unit 8: Polynomials & Factoring Performance Tasks

Instructions: Choose one performance task. Write all your work on a separate clean piece of paper and attach it to this page.

Big Idea: Equivalence
You can represent algebraic expressions in many ways. When you add, subtract, multiply, divide, and factor polynomials, you replace one expression with an equivalent expression.
Big Idea: Properties
The properties of real numbers are the basis of the laws of algebra. You can apply properties of real numbers, such as the Distributive Property, to polynomials.

Performance Task 1

Solve. Show all your work and explain your steps.
An archery target consists of a circular bull's-eye with radius x, surrounded by four rings with width y. What is the area of the outermost ring in terms of x and y?

Performance Task 2

*Solve. Show all of your work and explain your steps.*
You are painting the outside of a jewelry box, including the bottom. To find the surface area (S.A.) of the jewelry box, you can use the formula $S.A. = 2wl + 2lh + 2wh$, where l is the length, w is the width, and h is the height. What is the surface area of the jewelry box in terms of x?

Performance Task 3

Solve. Show all your work and explain your steps.
The volume of a square prism is $144x^3 + 216x^2 + 81x$. What is an expression that could describe the perimeter of one of the prism's square faces?
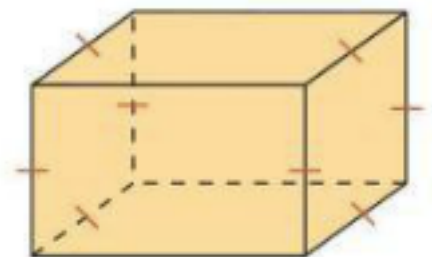
Performance Task Assessment: Analytic Holistic Scoring

Developing Autonomy—The student

3	Persevered to complete the problem without help
2	Completed most of the problem without help
1	Needed key hints to complete the problem
0	Needed extensive guidance to work the problem

The Solution Process—The student's work showed

3	A complete and appropriate solution process
2	An appropriate solution process that is almost complete
1	An appropriate process that is partially complete
0	An inappropriate process or no evidence of a process

The Conclusion/Answer—The student's answer is an

3	Accurate conclusion, supported by valid evidence and reasons, appropriate to this problem and context
2	Inaccurate but logical conclusion, supported by evidence and reasoning but incorrect due to a minor factual error (in details of problem, in computation, recall a formula, etc.) or minor mistake in reasoning
1	Inaccurate but logical conclusion that overlooks, or gets wrong significant facts (about the problem, the rule, computation, etc.)
0	Inappropriate conclusion: not supported by facts and logic, or there is no conclusion

Teacher Comments: