

Name: _____ Show work needed to justify your answer. Date: _____

HW # 60: Algebra 1 - Standard 38 - Using the Distributive Property

5 points

Use the Distributive Property to factor each polynomial.

1. $16t - 40y$

2. $30v + 50x$

3. $2k^2 + 4k$

4. $5z^2 + 10z$

5. $4a^2b^2 + 2a^2b - 10ab^2$

6. $5c^2v - 15c^2v^2 + 5c^2v^3$

7. **PHYSICS** The distance d an object falls after t seconds is given by $d = 16t^2$ (ignoring air resistance). To find the height of an object launched upward from ground level at a rate of 32 feet per second, use the expression $32t - 16t^2$, where t is the time in seconds. Factor the expression.

8. **SWIMMING POOL** The area of a rectangular swimming pool is given by the expression $12w - w^2$, where w is the width of one side. Factor the expression.

10. **PETS** Conner is playing with his dog. He tosses a treat upward with an initial velocity of 13.7 meters per second. His hand starts at the same height as the dog's mouth, so the height of the treat above the dog's mouth in meters after t seconds is given by the expression $13.7t - 4.9t^2$. Factor the expression.