

Show your reasoning. Use graph paper for models and additional work.

- Tower School

ART OF PROBLEM SOLVING

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6. Evaluate $(-6)(17) + (-6)(-7)$ in two ways: first by multiplying, and then by factoring. Which method is more efficient?
7. Find the value of $1 - 2 + 3 - 4 + \cdots + 19 - 20$ by grouping terms. Then express the same calculation using multiplication.
8. Three nonzero integers have product 72. Exactly two are negative, and their absolute values are consecutive integers. Find all possible triples of absolute values.
9. Use the distributive property and the fact that $0 = (-3) \cdot 0$ to explain why $(-3)(-5) = 15$. Your reasoning should not simply quote the sign rule.