

Name _____

4-1 Lesson Master

Questions on SPUR Objectives
See Student Edition pages 275–277 for objectives.

PROPERTIES Objective F

In 1–4, tell whether the statement is true or false and justify your answer.

1. 14 is a factor of 154. _____

2. 10,001 is divisible by 1001. _____

3. $2n$ is a factor of $4n^7 + 2n^4 + 6n$. _____

4. Prove or disprove the following conjecture:
Let p be an integer. If 3 is a factor of p , then 3 is a factor of $p + 12$.

5. Find a counterexample to disprove the following statement:
For all polynomials $q(x)$, $r(x)$, and $s(x)$, if $(s(x)$ is a factor of $q(x) + r(x))$,
then $(q(x)$ is divisible by $s(x)$ or $r(x)$ is divisible by $s(x))$.

6. Prove that the sum of any five consecutive integers is divisible by 5.

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