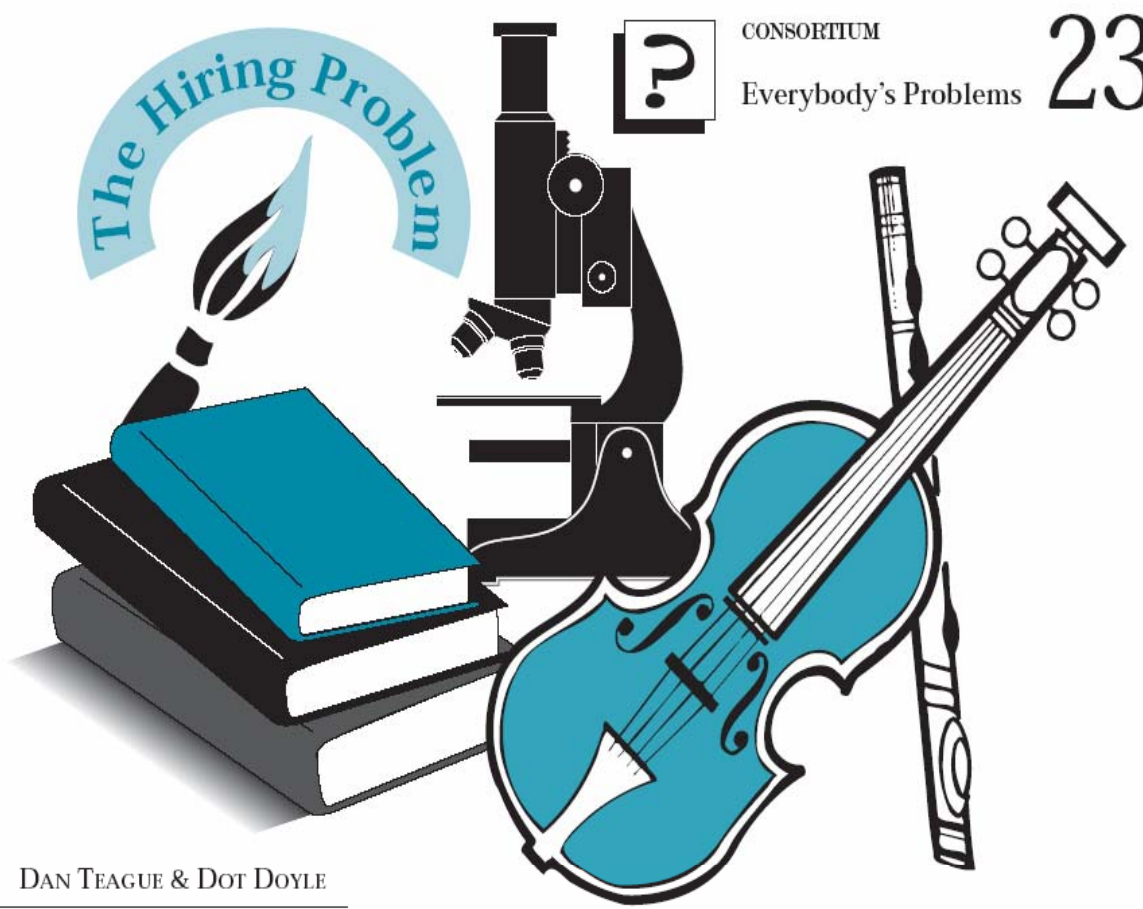


# The Hiring Problem



DAN TEAGUE & DOT DOYLE

A new wing has been added to the magnet school for Mathematics, Science, and Technology so that the student population can be increased from 489 to 631. The school includes 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades. The new sophomore class will have 142 more students than the graduating senior class. To accommodate the increase, the size of the faculty is being increased by seven. There is a great deal of discussion on campus about which departments should get the extra teachers. At the time of the increase there are:

- 6 Mathematics faculty
- 5 English faculty
- 3 Chemistry faculty
- 3 Foreign Language faculty
- 3 Physics faculty
- 1 Music instructor
- 4 Biology faculty
- 1 Art instructor
- 5 Social Studies faculty

Should every discipline (English, Social Studies, Mathematics, Physics, Biology, Chemistry, and Foreign Language) each receive one new teacher, or does the demand for courses argue that some departments should receive two new teachers while others receive none?

Information from the Registrar's office suggest that 5% of the students drop out prior to graduation and that, occasionally, students "double up" and take two courses at a time in a single discipline.

How would you hire the new faculty to meet the needs of the school as fairly as possible? Explain why your decision is fair.

Course Enrollment Totals—September 2003

Department	10 <sup>th</sup>	11 <sup>th</sup>	12 <sup>th</sup>	Total
Art	21	33	15	69
Biology	198	95	26	319
Chemistry	59	126	109	294
English	183	155	151	489
French	41	49	32	122
German	19	22	10	51
Spanish	51	33	26	110
Mathematics	184	201	262	647
Music	20	26	49	95
Physics	50	58	183	291
Social Studies	183	131	59	373

TABLE 1.

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