The language of comparison statements is challenging. Help students to understand that in the statement, *The ratio of the sixth-grade goal to the seventh-grade goal is 60 to 90*, it is important that the first number matches the first described quantity and the second number matches the second.
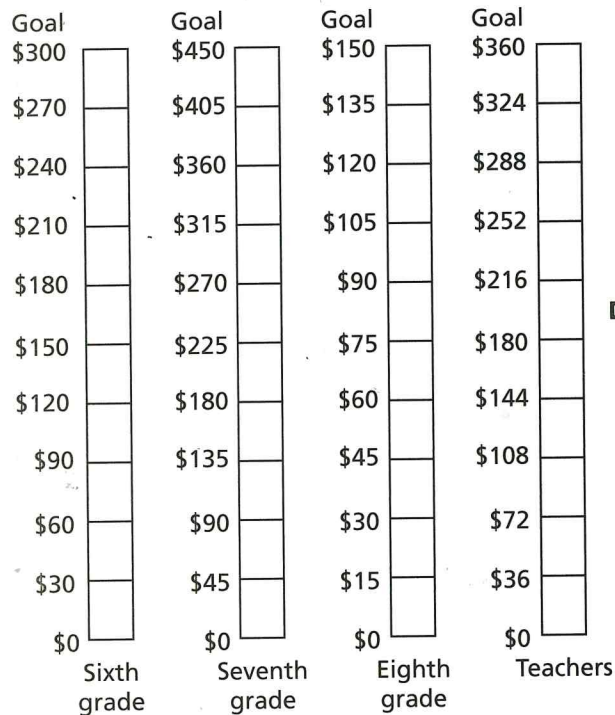

Assignment Guide for Problem 1.2

Applications: 3–4 | Connections: 41–43
Extensions: 65–70

Answers to Problem 1.2

A.

B. 1. Ben's second claim is also true. The sixth graders plan to raise 10 sets of $30. The seventh graders plan to raise 10 sets of $45. So for each set of $30 in the sixth-graders' goal, there is a set of $45 in the seventh-graders' goal.

2. Answers will vary. Possible answers: For every $30 the sixth graders plan to raise, the eighth graders plan to raise $15. For every $90 the sixth graders plan to raise, the teachers plan to raise $108. For every $30 the eighth graders plan to raise, the seventh graders plan to raise $90.

C. 1. Each number represents a dollar amount. For every 60 dollars in the sixth-grade goal, there are 90 dollars in the seventh-grade goal.

2. Answers will depend on the answers to Question B, part 2. Possible answers: The ratio of the sixth-grade goal to the eighth-grade goal is 30 to 15. The ratio of the sixth-grade goal to the teachers' goal is 90 to 108. The ratio of the eighth-grade goal to the seventh-grade goal is 30 to 90.

D. 1. Answers will vary. Possible answers:
60 to 90 and 30 to 45
30 to 45 and 6 to 9

2. Students may notice that if you double (or halve) both numbers in the ratio, you get an equivalent ratio. Some may notice the same pattern based on tripling (or cutting in three), etc.

Some students may notice that when ratios are equivalent, the same multiplication relationship has to hold between the two numbers in the ratio. For example, the ratio *60 to 180* is equivalent to the ratio *10 to 30* because the second number in each ratio is equal to three times the first number.

Here are more examples of equivalent ratios: 60 to 30 and 30 to 15; 45 to 54 and 90 to 108; 60 to 180 and 30 to 90.