**4-5A Lesson Master**

**SKILLS** Objective B

In 1 and 2, solve and check.

1. \(2y - 18 < -y - 12\)

2. \(4(s - 4.5) + 8 \leq 6s\)

In 3 and 4, solve and graph on a number line.

3. \(\frac{1}{6}(n - 9) + 2 < -5n\)

4. \(0.52t - 1.42 \geq -2.31t\)

**PROPERTIES** Objective F

5. Fill in what was done to solve the inequality.

\[14x - 6 \leq 6x + 14\]

\[8x - 6 \leq 14\]

\[8x \leq 20\]

\[x \leq \frac{20}{8}\]

\[x \leq \frac{5}{2}\]

6. Consider the inequality \(700y + 200 \geq 1100 - 100y\).

a. Solve it by first adding \(100y\) to each side.

b. Solve it by first adding \(-700y\) to each side.

**USES** Objective H

7. A manufacturing company is investing in new machinery. They must choose between two similar machines. Machine A costs $120,000 and does $2,550 worth of work per day. Machine B costs $105,500 and does $2,360 worth of work per day. How many days of work are required for machine A to be the cheaper option?

8. Joe Nodough made some unwise investments and is $92,000 in debt, but he works hard and is able to repay $7,000 per year. His brother, Igor, has $2,000 but is relatively less frugal and saves only $800 per year. Assuming no interest on Joe’s debt, for how long will Joe have less money than Igor?