Find the tangent of each acute angle. Write your answers as fractions in simplest form.

1. \( \tan 45^\circ / \tan 24^\circ / \tan 51^\circ \)
2. \( \tan 36^\circ / \tan 15^\circ / \tan 39^\circ \)
3. \( \tan 24^\circ / \tan 32^\circ / \tan 43^\circ \)

Use a calculator to approximate the tangent value to four decimal places.

4. \( \tan 32^\circ \approx 0.6249 \)
5. \( \tan 68^\circ \approx 2.4751 \)
6. \( \tan 43^\circ \approx 0.9325 \)
7. \( \tan 76^\circ \approx 4.3301 \)
8. \( \tan 14^\circ \approx 0.2485 \)
9. \( \tan 82^\circ \approx 5.0158 \)

Use the table of trigonometric ratios on page 869 to write the value of the tangent.

10. \( \tan 22^\circ \approx 0.4040 \)
11. \( \tan 56^\circ \approx 1.4321 \)
12. \( \tan 39^\circ \approx 0.8090 \)

In Exercises 13–15, find the value of \( x \). Round to the nearest tenth.

13. \( \tan 35^\circ / \tan 31^\circ \)
14. \( \tan x / \tan 65^\circ \)
15. \( \tan 38^\circ / \tan 31^\circ \)

16. A hot air balloon climbs, at a 30° angle to the ground, to a height of 800 feet. To the nearest tenth of a foot, what ground distance has the balloon traveled to reach 800 feet?

17. You are standing 80 feet from the base of a building. You estimate that the angle of elevation from your feet to the top of the building is about 70°. About how tall is the building?