

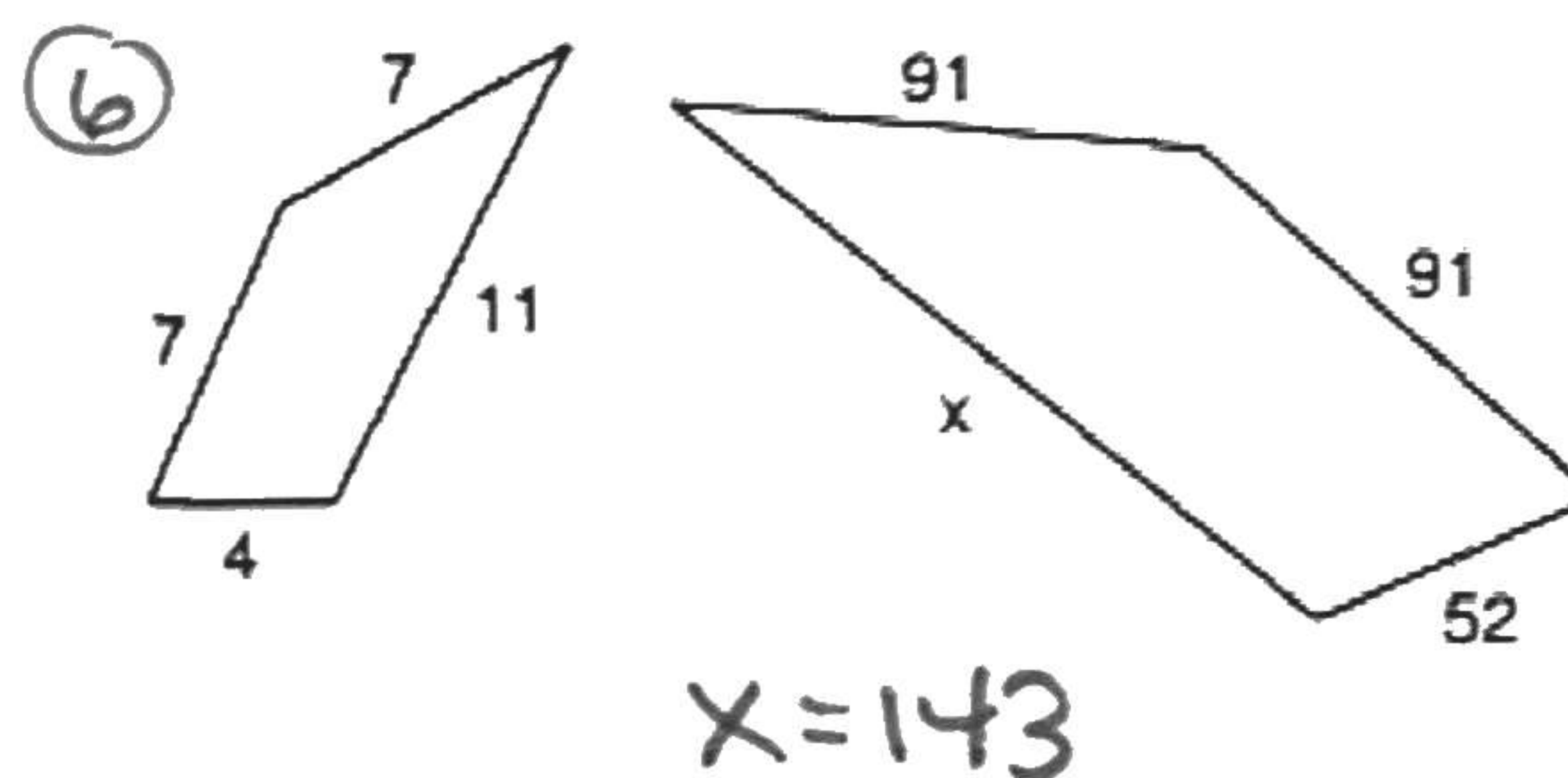
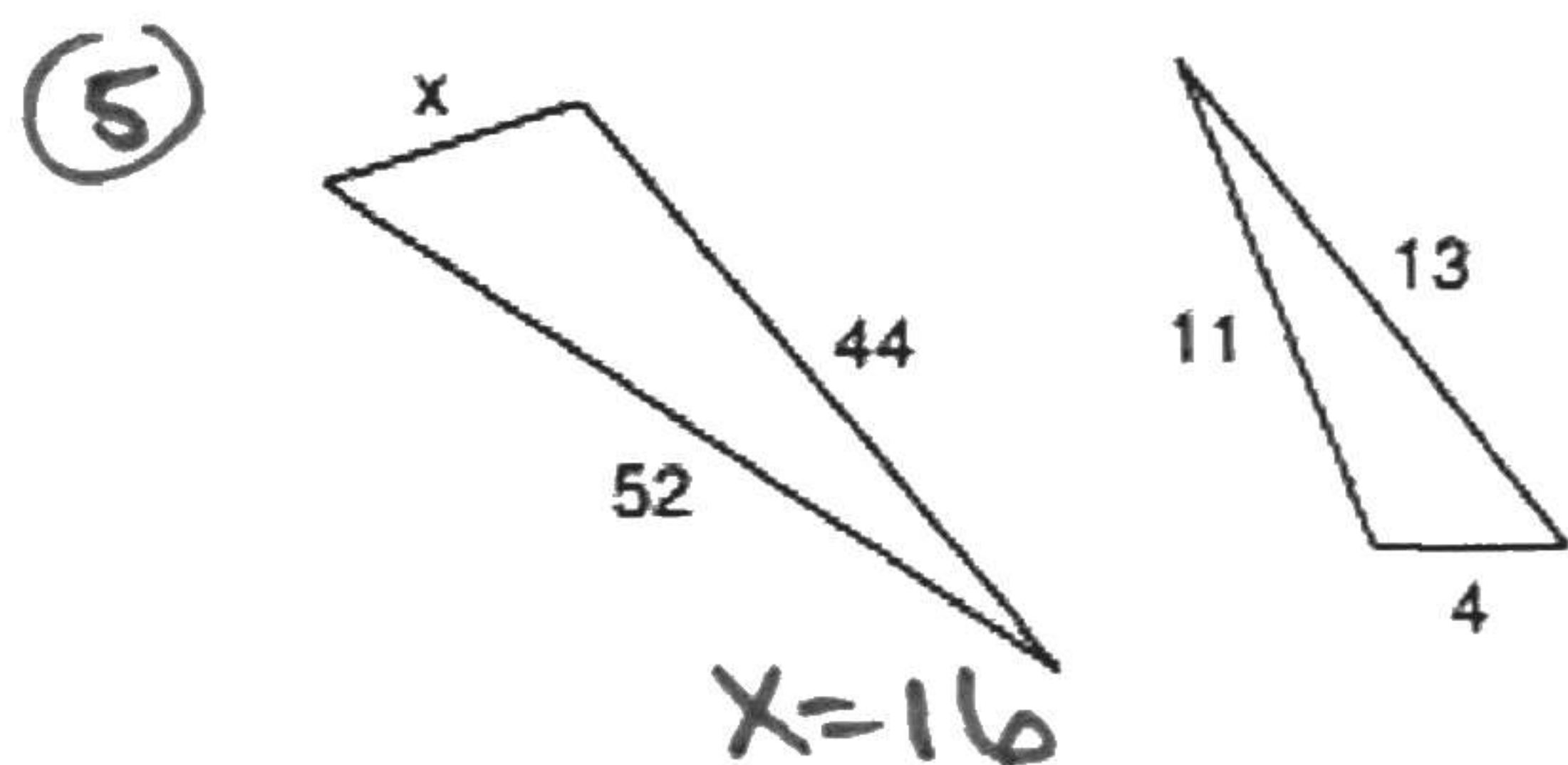
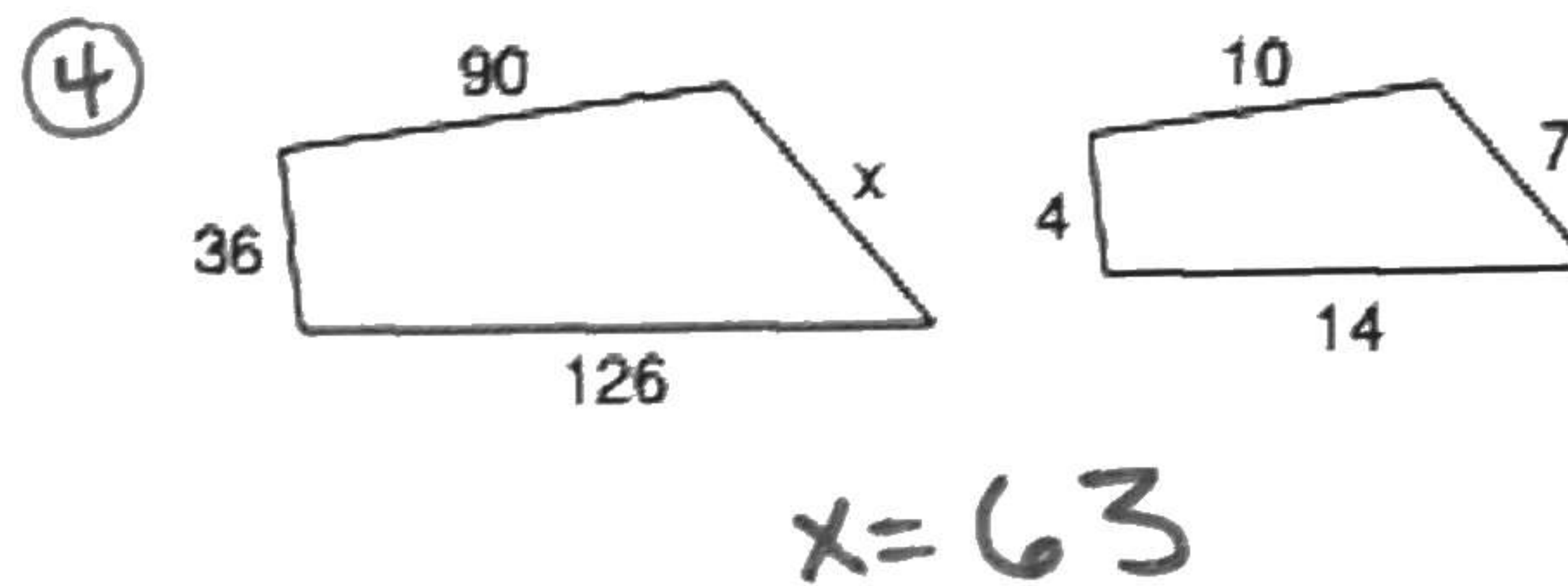
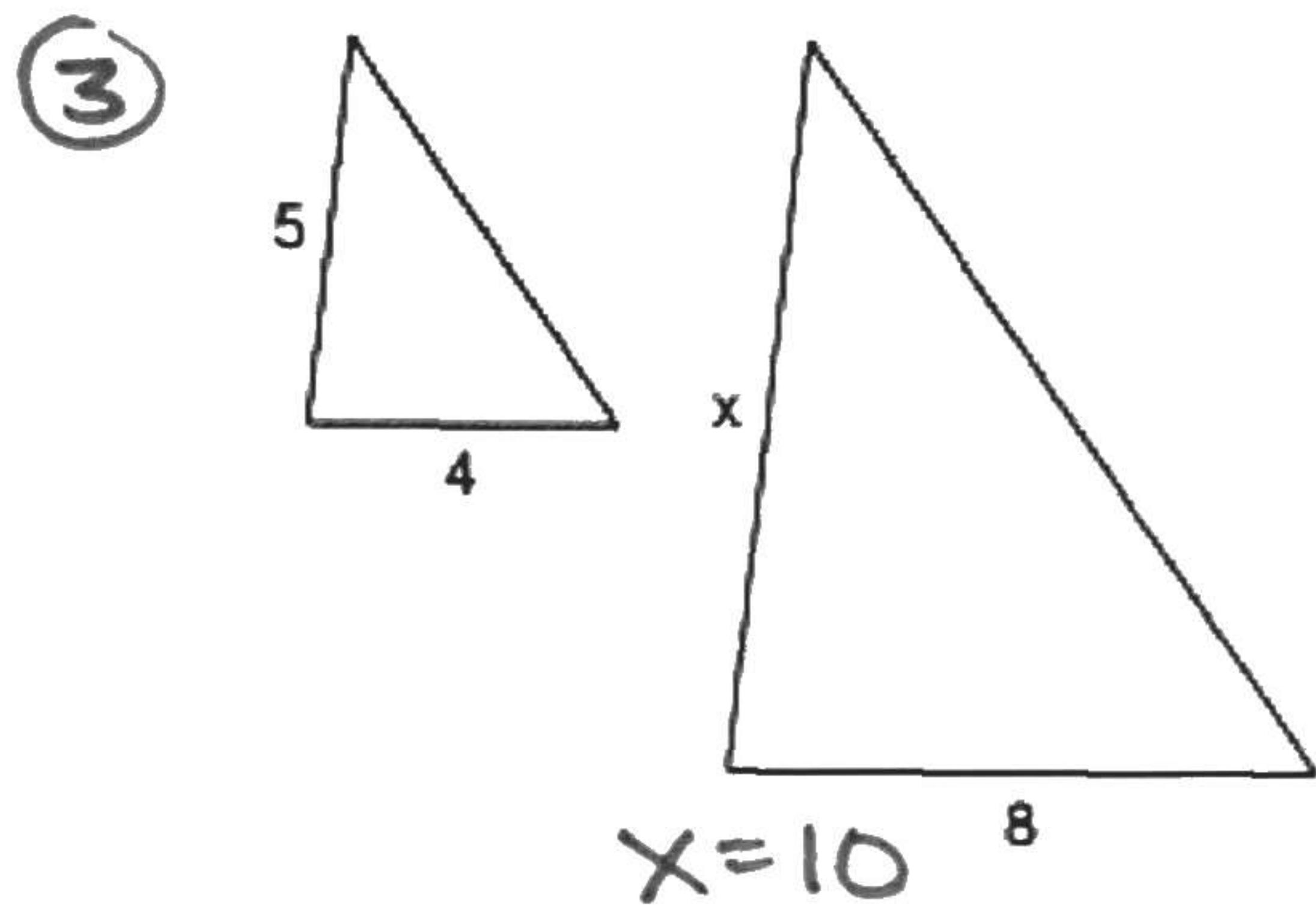
### Similar Figures and Percent Change Study Guide

- ① A 6 ft tall tent standing next to a cardboard box casts a 9 ft shadow. If the cardboard box casts a shadow that is 6 ft long then how tall is it?

4ft

- ② A statue that is 12 ft tall casts a shadow that is 15 ft long. Find the length of the shadow that a 8 ft cardboard box casts.

10 ft



- ⑦ Joe wants to enlarge a 4-in by 6-in photo so that the longer side will be 14 in. How long will the shorter side be?  $9\frac{1}{3}$  in

- ⑧ A tree casts a shadow 30 feet long. If a man 6 feet tall casts a shadow 5 feet long at the same time of day, how tall is the tree? 36 ft

- ⑨ What is the percent change formula?  $\% \text{ change} = \frac{\text{change}}{\text{original}}$

Find the percent change. Remember to indicate whether it is increase or decrease.

- ⑩ From 16 to 32 100% increase
- ⑪ From 49 to 30 38.78% decrease
- ⑫ From 8 to 25 212.5% increase
- ⑬ From 112 to 155 38.39% increase
- ⑭ From 39 to 6 84.62% decrease
- ⑮ From 44 to 9 79.55% decrease
- ⑯ From 136 to 75 44.85% decrease
- ⑰ From 79 to 83 5.06% increase
- ⑱ From 29 to 17 41.38% decrease
- ⑲ From 44 to 6 86.36% decrease

- ⑳ Bonus: What does it mean when the percent change is more than 100%? Provide at least 2 examples in your explanation. 100% increase means that the original amount was doubled, so an increase of greater than 100% means it will be more than twice the original amount.