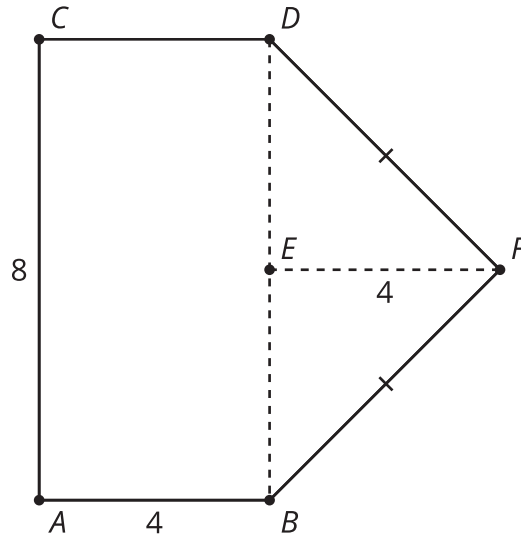# Scaling a Playground

Here's a playground for a school of 360 children in Springfield.
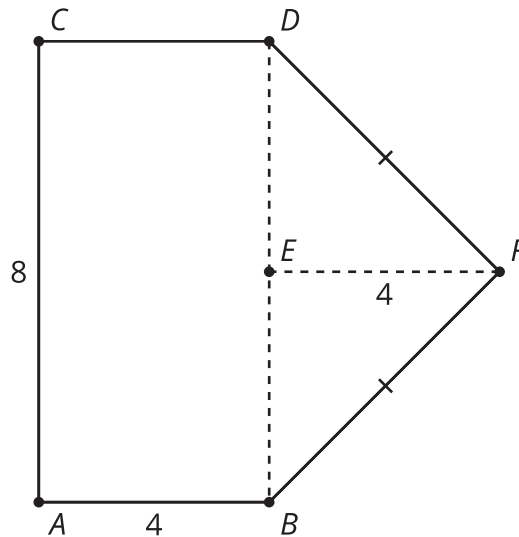
1 unit = 10 yards

1. The fence around the playground costs 90 dollars per 50-foot roll. Laying the grass across the area costs 400 dollars per 500 square feet. How much did the fencing and grass for this playground cost to build?

2. How many kids per square yard can Springfield's playground hold?

3. There's a new playground going up in nearby Wintermeadow. Wintermeadow has a budget about 3 times greater than Springfield's. Recommend a playground shape and size that would fit Wintermeadow's budget and hold at least 3 times as many kids as Springfield's playground at the same density of kids per square yard. How many kids can your playground hold?

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1. The fence around the playground costs 90 dollars per 50-foot roll. Laying the grass across the area costs 400 dollars per 500 square feet. How much did the fencing and grass for this playground cost to build?

2. There's a new playground going up in nearby Wintermeadow. Wintermeadow has a budget about 3 times greater than Springfield's, and wonders if they can build their playground by scaling up Springfield's playground dimensions by 3. Calculate the cost of grass and fencing for a playground that has been dilated using a scale factor of 3. Will Wintermeadow's budget cover the costs?

3. How many children could play on the playground that is scaled up by a scale factor of 3, at the same density of kids per square yard as on Springfield's playground?

4. Recommend a playground shape and size that would fit Wintermeadow's budget and hold at least 3 times as many kids as Springfield's playground. How many kids can your playground hold?