

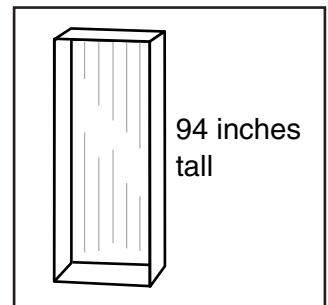
Challenge

Problem-Solving Strategy: Solve a Simpler Problem

1. Jessica takes dance lessons. There are 8 girls in her class. On the first day of class, the teacher had the dancers pair up for 5 minutes. Each pair made up a movement phrase to show the class. How many different movement phrases were made the first day?

If the teacher continues this exercise each week until every dancer is paired with each of the other dancers once, how many total movement phrases will the class make? How much time will be spent making movement phrases? Explain how you found your answers.

2. Wynnona is building a bookcase for her bedroom. She has this rectangular frame built. The frame is 94 inches tall. She wants to have 6 shelves. How many pieces of 2-inch thick wood will she need? How far apart should she place each shelf?



Wynnona's books are about 2 inches thick. If she has 85 books, can she fit them in the bookcase if each shelf is 2 feet wide? Explain.

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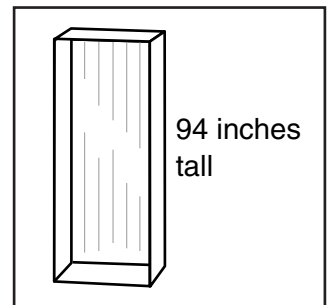
4 movement phrases

If the teacher continues this exercise each week until every dancer is paired with each of the other dancers once, how many total movement phrases will the class make? How much time will be spent making movement phrases? Explain how you found your answers.

28 movement phrases; 35 minutes

Explanations will vary.

2. Wynnona is building a bookcase for her bedroom. She has this rectangular frame built. The frame is 94 inches tall. She wants to have 6 shelves. How many pieces of 2-inch thick wood will she need? How far apart should she place each shelf?



5 pieces of wood;

14 inches between each shelf

Wynnona's books are about 2 inches thick. If she has 85 books, can she fit them in the bookcase if each shelf is 2 feet wide? Explain.

No. Possible answer: Each shelf is 2 feet or 24 inches

wide. If each book is 2 inches thick, she can fit 12

books per shelf. Since there are 6 shelves, $6 \times 12 = 72$

books.