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Teacher:
Class/ Block:
Date: $\qquad$
Lesson 1: Estimating Large Crowds and Quantities

1. 10 People fit comfortably in a 4 feet by 4 feet area. Use this value to estimate the size of a crowd that is 2 yards deep and 1 mile long.
2. 12 People fit comfortably in a 4 feet by 4 feet area. Use this value to estimate the size of a crowd that is 3 yards deep and 15 feet I
3. One person takes up about 2.5 square feet of space. Use this value to estimate how many people can fit in an area that is 120 feet wide and 300 feet long.
4. Two people take up about 6.25 square feet of space. Use this value to estimate how many people can fit in an area that is 19 yards long and 11 yards wide.

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5. There's a free Cardi B concert at Centennial Park this Friday and promoters are expecting a massive crowd. If one person takes up 3.75 square feet of space, how many people should they expect if the park is in an area that is 9 yards deep and 3.25 miles long?
6. A game is packaged in a box. Each game cube has a side length of 2 inches. How many games can be packed inside of a box whose dimensions are 1 foot by 1 foot by 2 feet?
7. A golf ball has a diameter of $1.6 \mathrm{in}^{3}$. How many golf balls will fit inside of a storage unit that is
10 feet wide, 20 feet long, and 8 feet high? (Volume of a sphere $=\frac{4}{3} \pi r^{3}$ )

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8. A golf ball has a diameter of 1.2 in. How many golf balls will fit inside of a storage box that is 4 feet wide, 12 feet long, and 3 feet high? (Volume of a sphere $=\frac{4}{3} \pi r^{3}$ )
9. A game is packaged in a box. Each game cube has a side length of 3.7 inches. How many games can be packed inside of a box whose dimensions are 3 foot by 3 foot by 5 feet?
10. A golf ball has a diameter of 1.6 in. How many golf balls will fit inside of a storage unit that is 14 feet wide, 23 feet long, and 9 feet high? (Volume of a sphere $=$ $\frac{4}{3} \pi r^{3}$ )
11. A golf ball has a diameter of 7 in. How many golf balls will fit inside of a storage unit that is 10 feet wide, 10 yards long, and 88 inches high? (Volume of a sphere $=\frac{4}{3} \pi r^{3}$ )

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12. A game is packaged in a box. Each game cube has a side length of 5 inches. How many games can be packed inside two boxes whose dimensions are 2 yards by 4 feet by 9 feet?
13. A game is packaged in a shipping box due to a company in 5 days. Each game cube has a side length of 2.5 inches. How many games can be packed inside a shipping container whose dimensions are 5 feet by 4 feet by 9 feet?
14. A golf ball has a diameter of 1.4 in. How many golf balls will fit inside of a storage unit that is 12 feet wide, 15 feet long, and 10 feet high? (Volume of a sphere $=$ $\frac{4}{3} \pi r^{3}$ )

