
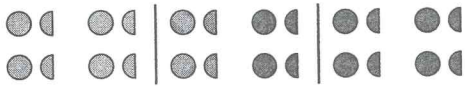


Grade 5 Chapter 12 Lesson 6 Solve Problems by Making Models

Answers

1. For example, Heather used the coloured counters because it was easy to divide them into 2 equal groups to represent $\frac{1}{2}$ of the players and then into 3 equal groups to represent $\frac{1}{3}$ of the players.

2. For example, Heather could use a picture such as  to represent $1\frac{1}{2}$ pieces of fruit. Then using the same model as in the example, Heather could draw the following picture:

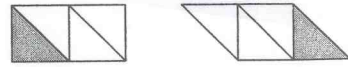


From the picture, Heather would count the whole circles and the half circles to get 9 apples, 6 oranges, and 3 pears.

3. Since $1\frac{1}{2} > \frac{4}{3}$, then Patrick used more flour.



4. For example,

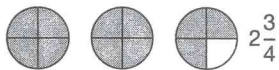


5. kitchen - $\frac{1}{4}$, living room - $\frac{3}{4}$, living room - 75 m^2
 bedroom - $\frac{1}{2}$, bathroom - $\frac{1}{2}$; bedroom - 100 m^2 ,
 bathroom - 100 m^2

6. Start by figuring out how many green triangles fit inside the big triangle. Do this by breaking up all the shapes into triangles. 6 triangles fit into each hexagon. Since there are 2 hexagons then this accounts for 12 triangles. 3 triangles fit into each trapezoid. Since there is 1 trapezoid then this accounts for 3 triangles. 2 triangles fit into each rhombus. Since there are 2 rhombuses then this accounts for 4 triangles. Then there are a total of $12 + 3 + 4 + 6$ or 25 triangles in the large triangle.

- The large triangle shows 6 green triangles. This represents $\frac{6}{25}$ of the whole area of the large triangle.
- The large triangle shows 2 blue rhombuses. This represents $\frac{4}{25}$ of the whole area of the large triangle.
- The large triangle shows 1 red trapezoid. This represents $\frac{3}{25}$ of the whole area of the large triangle.
- The large triangle shows 2 yellow hexagons. This represents $\frac{12}{25}$ of the whole area of the large triangle.

7. Answers may vary. For example: Colin runs $2\frac{3}{4}$ km in 30 min and Emily runs $\frac{7}{3}$ km in the same amount of time. Who ran the farthest in 30 min? Use a model to solve the problems. Answer: $2\frac{3}{4}$ can be written as an improper fraction as $\frac{11}{4}$. The fractions $\frac{11}{4}$ and $\frac{7}{3}$ can be modelled using fraction circles, and then the amounts compared.



From the model we can see that $2\frac{3}{4}$ is larger than $\frac{7}{3}$. This means that Colin ran the farthest.