

Name _____

Investigate Remainders

I Can use models to solve division problems with remainders.

Florida's B.E.S.T.

- Number Sense & Operations 4.NSO.2.4, 4.NSO.2.5
- Algebraic Reasoning 4.AR.1.1
- Mathematical Thinking & Reasoning MTR.2.1, MTR.3.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1

Investigate

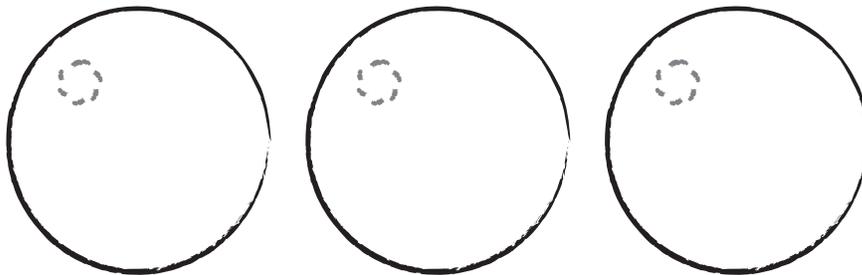
Materials ■ counters

Taliya and 2 friends are playing a game of dominoes. There are 28 dominoes in the set. Taliya wants each player to receive the same number of dominoes. Can she divide them equally among the 3 players? Why or why not?

You can use division to find the number of dominoes each player will receive.

- A. Use 28 counters to represent the 28 dominoes. Then draw 3 circles to represent the 3 players.
- B. Share the counters equally among the 3 groups by placing them in the circles.

Draw a quick picture to show your work.



- C. Find the number of counters in each group and the number of counters left over. Record your answer.

_____ counters in each group

_____ counter left over



Draw Conclusions

1. How many dominoes does each player receive? _____

How many dominoes are left over? _____



Make Connections

When a number cannot be divided evenly, the amount left over is called the **remainder**.

Use counters to find $39 \div 5$.

- Share 39 counters equally among 5 groups. The number of counters left over is the remainder.

Draw a quick picture to show your work.



For $39 \div 5$, the quotient is _____ and the remainder is _____, or $7 \text{ r}4$.

Write the remainder as a fraction.

Since there are 4 counters left and you need 5 to keep the groups equal, the remainder is $\frac{4}{5}$.



MTR
4.1 Engage in discussions on mathematical thinking.

How do you know when there will be a remainder in a division problem?

Share and Show



find the quotient and remainder. Write the remainder as a fraction.

1. $10 \div 3$

2. $28 \div 5$

3. $15 \div 6$

4. $11 \div 3$

5. $29 \div 4$

6. $34 \div 5$

7. $25 \div 3$

8. $7 \overline{)20}$

Divide.

9. $4 \overline{)35}$

10. $23 \div 8$

12. Alyson has 46 beads to make bracelets. Each bracelet has 5 beads. How many more beads does Alyson need so that all the beads she has are used?

13. For 13a–13d, choose Yes or No to tell whether the division expression has a remainder.

13a. $36 \div 9$ Yes No

13b. $23 \div 3$ Yes No

13c. $82 \div 9$ Yes No

13d. $28 \div 7$ Yes No

14. Macy, Kayley, Maddie, and Rachel collected 13 marbles. They want to share the marbles equally. How many marbles will each of the 4 girls get? How many marbles will be left over?

