Introducing Magic Squares

Fill in the blanks to make these squares into magic squares.

1

17		13	→ ___
	11	15	→ ___
9	19		→ ___

___ ___ ___   ___

2

12	27		→ ___
	15	21	→ ___
24		18	→ ___

___ ___ ___   ___

3

	16	6	→ ___
12		4	→ ___
10	0		→ ___

24 ___ ___   ___

4

13	11		→ ___
23		7	→ ___
	19	17	→ ___

___ ___ ___   45

5 Jane says that, in a magic square, the sum of the
top-left and bottom-right numbers are equal to the
sum of the top-right and bottom-left numbers. Do
you agree? Explain.

_____

_____

_____

Completing Magic Squares

In a magic star, each line of 4 numbers has the same sum. Complete the magic stars.

1
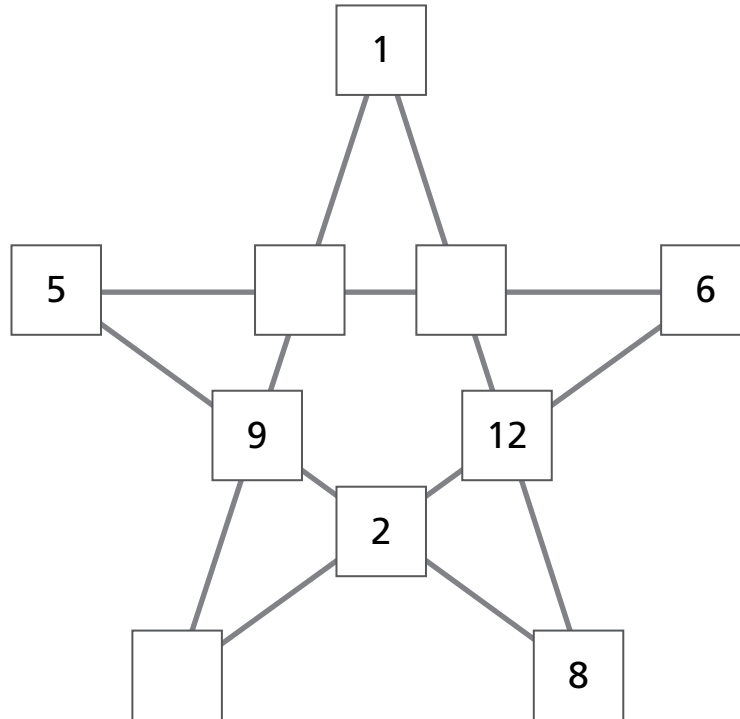
2
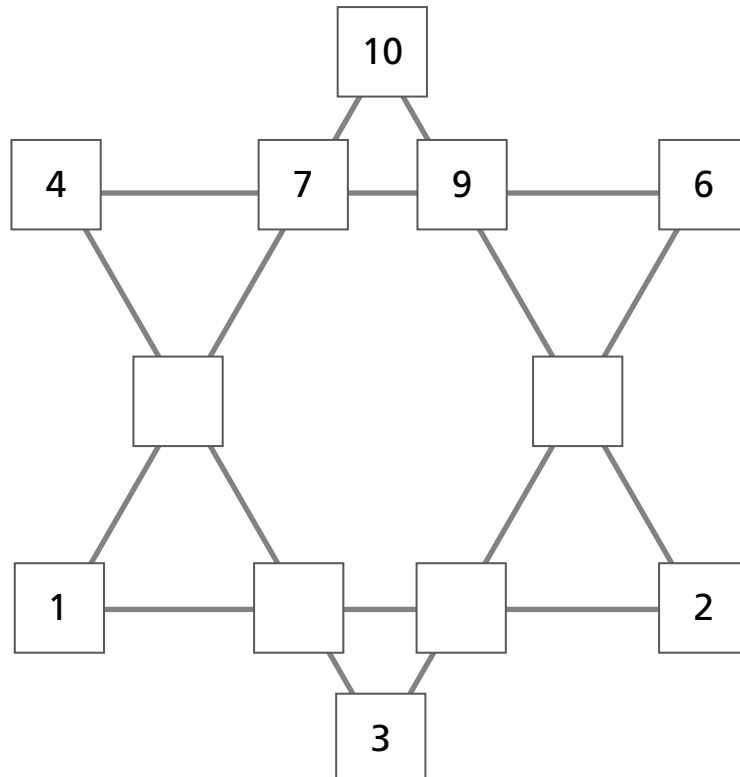
How Many Marbles?

Yara has 3 marbles. She puts them into 3 boxes marked *A*, *B*, and *C* in many different ways. Fill in the blanks in her table and find any ways she missed.

A	B	C	Total
0	0	3	
	3		
	0	0	
1	1		
	0	2	
	1	2	

Reasoning About Money

Dora collects aluminum cans for recycling.
She gets 5¢ for each can she turns in.

1 If Dora gets $1.00, how many cans did she turn in? _____

2 If Dora turns in 30 cans, how much money will she get? _____

3 Complete the table.

Dora turned in ■ cans . . .	and she got ■.
5	
10	
	75¢
	$1.00
25	
	$1.50

4 Graph the points from the table.

DORA'S EARNINGS

Amount of Money Received (vertical axis): $1.50, $1.25, $1.00, 75¢, 50¢, 25¢

Number of Cans (horizontal axis): 0, 5, 10, 15, 20, 25, 30
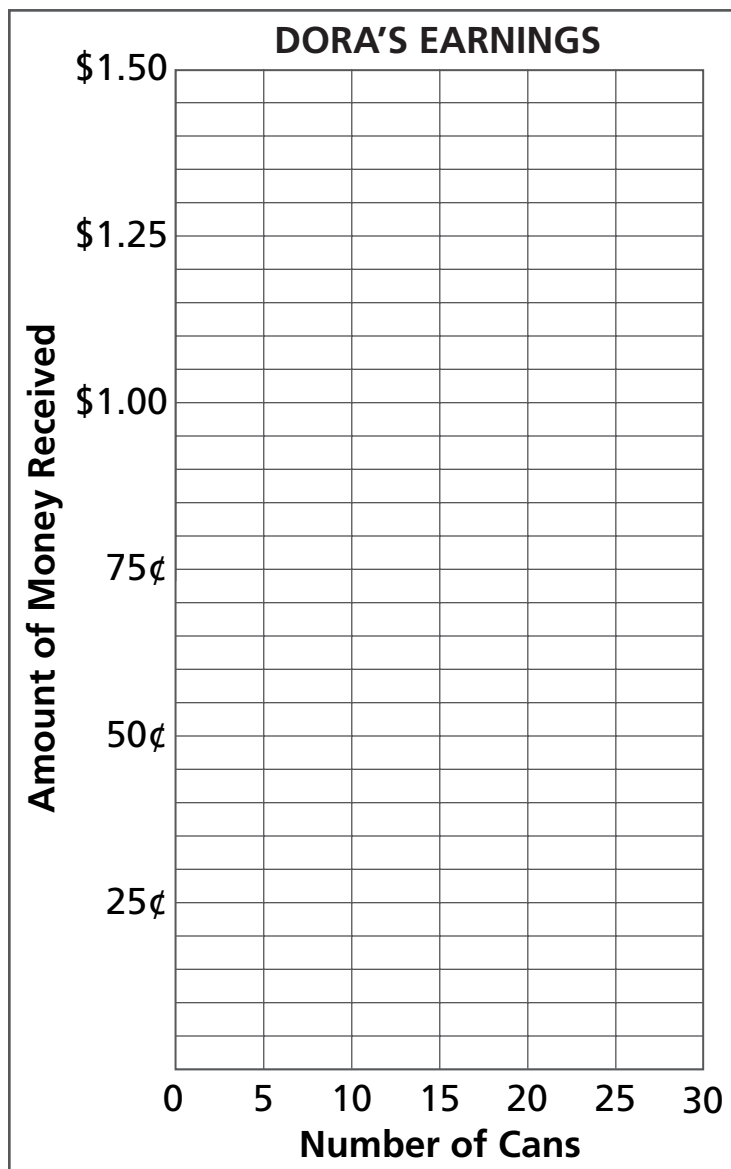
Drawing Conclusions

Jackie had some marbles and put all of them into *three* boxes marked *A, B,* and *C.* Decide if the statement is true (T) or false (F).

Statement ❶

If Jackie put the same number of marbles in each box, then the total number of marbles **must** be even.

T   F

Statement ❷

If Jackie put an even number of marbles in each box, then the total number of marbles **must** be even.

T   F

Statement ❸

If Jackie put an odd number of marbles in each box, then the total number of marbles **must** be odd.

T   F

Statement ❹

If Jackie started with an even number of marbles, then she **could not** have put the same number of marbles in each box.

T   F

Statement ❺

If Jackie put a different number of marbles in each box, the total number of marbles **must** be odd.

T   F

Using the Fewest Coins

10¢ can be made in different ways.

1 Are there any amounts of money that can be made in only one way? Explain.

_____

_____

2 For any amount, what coins would you use to get a combination using the largest number of coins? Explain.

_____

_____

3 Linda had 7 coins worth 53¢ in her pocket. She used 3 coins to buy a pencil. She now has 22¢. What were the 3 coins she used? Explain.

_____

_____

4 How many different amounts can you have with only 2 coins? Name the coins and amounts.

_____

_____

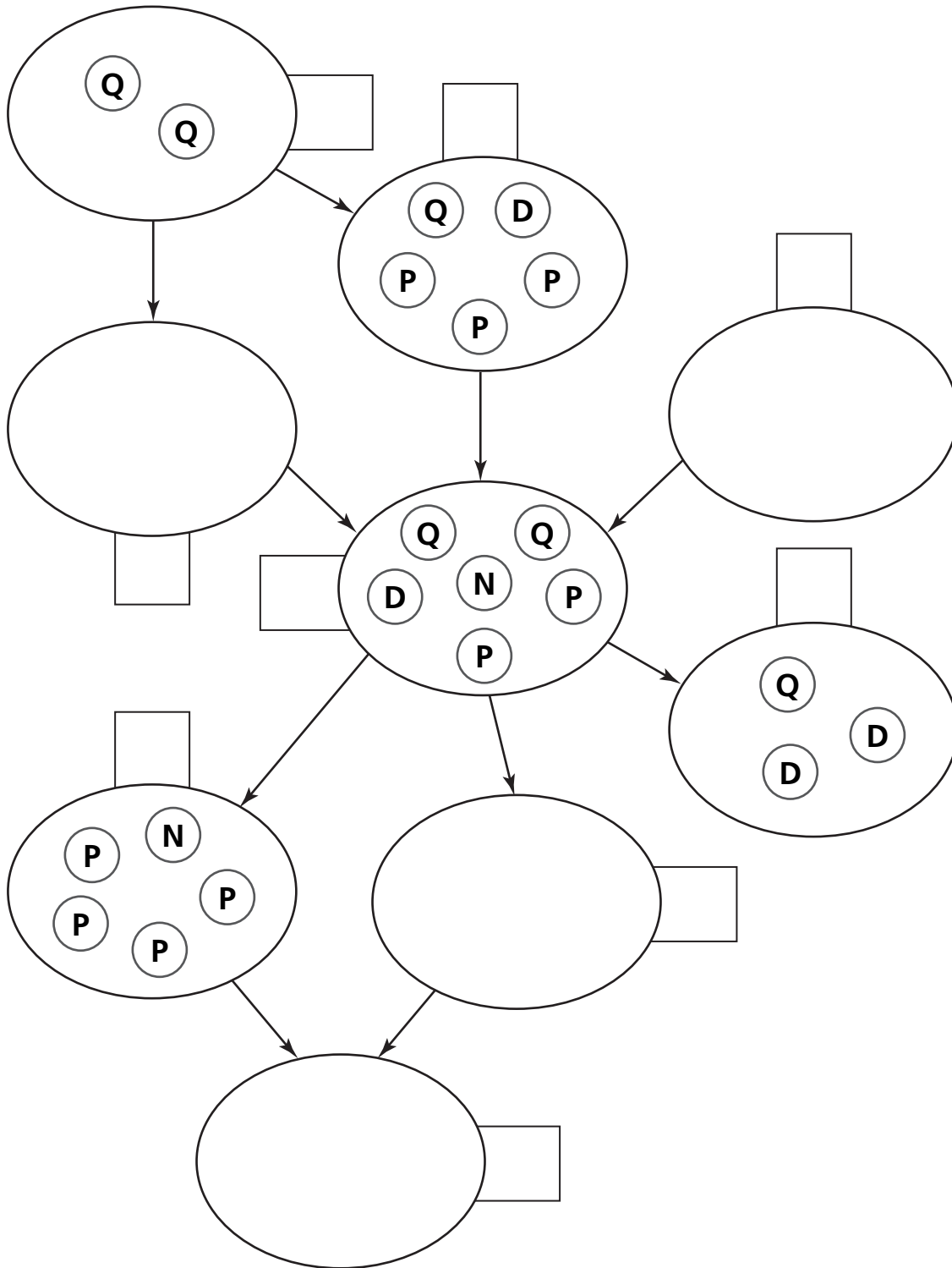**5** David has 1 quarter, 1 dime, 2 nickels, and 1 penny. How many combinations of 3 coins can he make? List the combinations.

Adding and Subtracting with Coins

**Add and subtract coins by completing the diagram.
Show each amount with the fewest coins.**

Estimating Sums and Differences

Write a number in the box that makes the sum a little more than 60.

1 ☐ + 19 = _____

2 ☐ + 38 = _____

3 ☐ + 46 = _____

4 ☐ + 9 = _____

5 Write the exact sum for Problems 1 to 4 on the line.

_____

Write a number in the box that makes the difference a little less than 30.

6 ☐ − 12 = _____

7 115 − ☐ = _____

8 92 − ☐ = _____

9 ☐ − 43 = _____

10 Write the exact difference for Problems 6 to 9 on the line.

_____

11 How could knowing **350 + 540** help you solve **357 + 546?**

_____

_____

_____