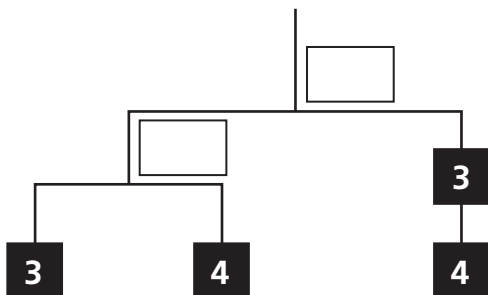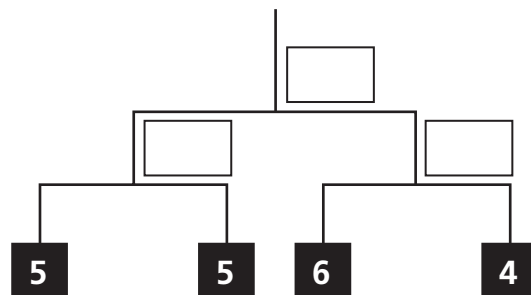# Introducing Mobiles

**Write *yes* or *no* at each arm of the mobile to
show if it is balanced. Write the total weights.**
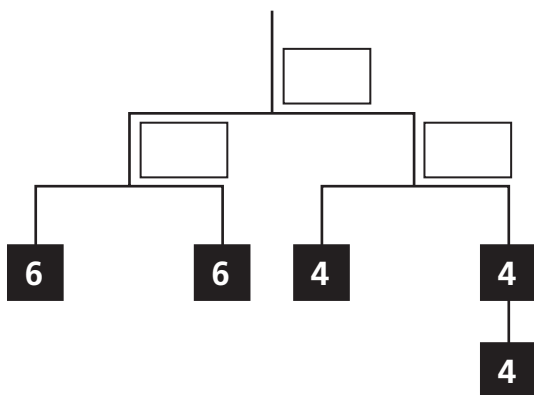
1 Total Weight: _____
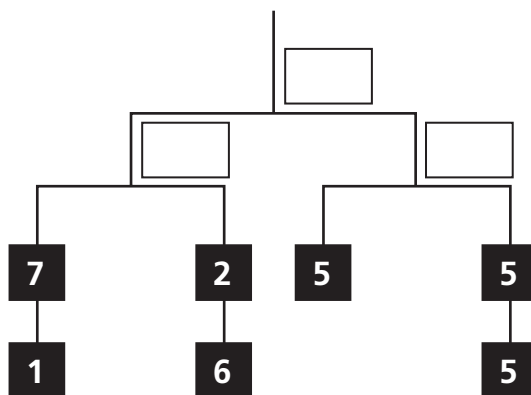
```
                  [  ]
        [  ]
                      [3]
    [3]       [4]     [4]
```

2 Total Weight: _____

```
                  [  ]
        [  ]           [  ]
    [5]     [5]    [6]       [4]
```

3 Total Weight: _____

```
                  [  ]
        [  ]       [  ]
    [6]     [6]  [4]     [4]
                          [4]
```

4 Total Weight: _____

```
                  [  ]
        [  ]           [  ]
    [7]     [2]    [5]       [5]
    [1]     [6]             [5]
```

Test Prep

5 Which group shows equivalent numbers?

A. $\frac{5}{2}$, $2\frac{5}{10}$, $2\frac{1}{2}$, 2.05

B. $3\frac{1}{5}$, $3\frac{5}{25}$, 3.2, $\frac{16}{5}$

C. $1\frac{2}{3}$, $1\frac{6}{9}$, 1.23, $\frac{15}{9}$

D. 4.025, $4\frac{25}{100}$, $\frac{17}{4}$, $4\frac{1}{4}$

Balancing Mobiles

**Martina makes mobiles that balance perfectly!
Find the weights of each shape in these mobiles
so they all balance.**

1 Total Weight: 12

$\square$ = _____ $\bigcirc$ = _____

2 Total Weight: 16

$\triangle$ = _____ $\bigcirc$ = _____

3 Total Weight: 40

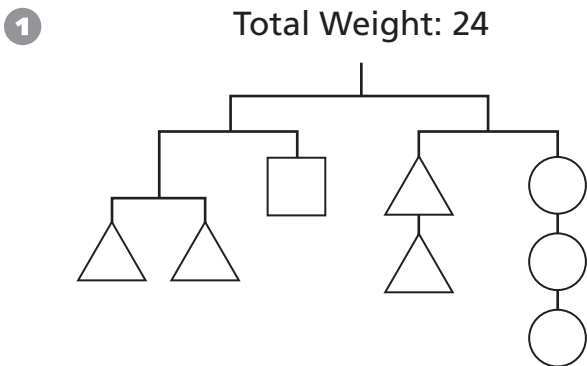$\square$ = _____ $\triangle$ = _____ $\bigcirc$ = _____

Test Prep

4 Suki earns the same amount of money (*x*)
each weekday for doing chores. If she does
her chores every weekday without forgetting,
she gets an extra amount (*y*) when she gets
paid. Which expression shows how much
money she can make in a week?

A. $7x + 7y$

B. $7x + y$

C. $5x - y$

D. $5x + y$

Equations for Mobiles

Circle equations that agree with each mobile. Then write the weight of each shape.

△ weight = T	♡ weight = H
◯ weight = C	☐ weight = S

1 Total Weight: 24

2 Total Weight: 40

$2T = S$ $2C = T$

$3C = S$ $2T + S = 3C$

$2S = H + C$ $H + C = S$

$S = 2T + H$ $2C + 2H = 2S$

△ = _____   ◯ = _____

☐ = _____

☐ = _____   ♡ = _____

◯ = _____   △ = _____

Test Prep

3 Which point is incorrectly labeled on the number line? What is a correct label for the point? Explain how you know.
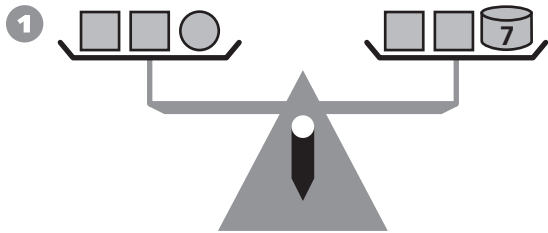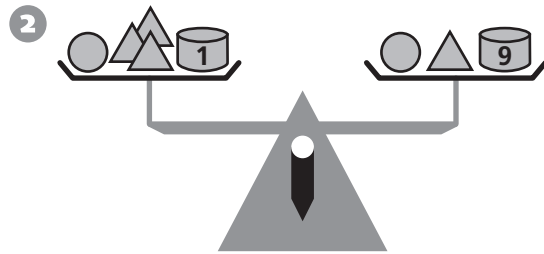
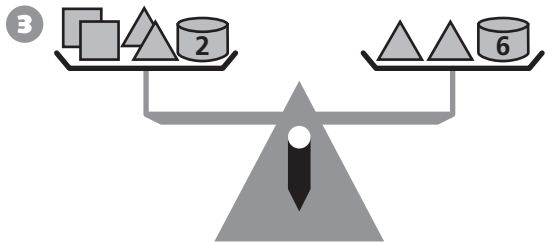0.25 $\frac{6}{9}$ $\frac{5}{3}$ 2.500

0   1   2   3

_____

_____
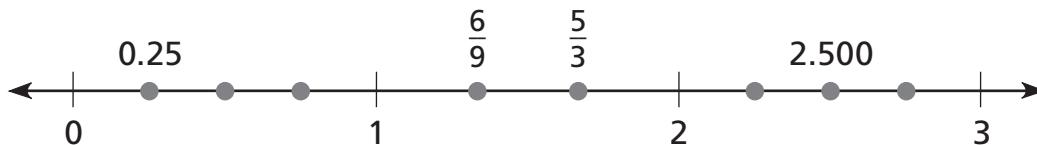
Balance Puzzles

Solve these balance puzzles.

1

□ = _3_   ○ = ____

2

△ = ____   ○ = _1_

3

□ = ____

4

○ = ____
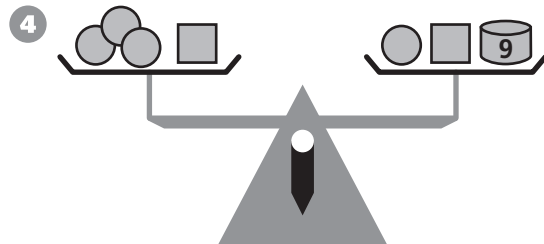
5 Write an equation for this puzzle. Use **t** for triangle, **c** for circle, and **s** for square.

_____
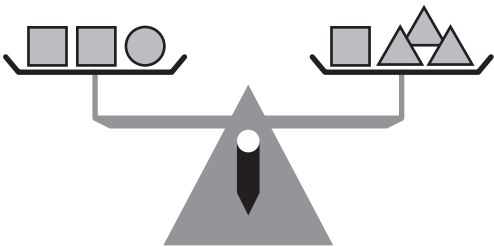
Test Prep

6 Which shows the prime factorization product of the prime factors of 80?

A. 2 × 2 × 4 × 5   **C.** 2 × 2 × 2 × 5

B. 2 × 2 × 3 × 5   **D.** 2 × 2 × 2 × 2 × 5

Number Tricks

Maxie invented this number trick.

1 Complete the chart, picking a starting number for yourself.

Words	Diagram	Shorthand	Number
Pick a number.	🎒	*N*	
Double it.			
Add 7.			
Multiply by 3.			
Subtract 11.			
Divide by 2.			

2 Barry said his final result was 26. Find his starting number, and explain how you found it.

_____

_____

_____

Test Prep

3 Carlos practices piano for 35 minutes every day. How much time will he spend practicing in the 31 days of May? Explain how you found your answer.

_____

_____

Making Diagrams

Match the situation to the diagram that illustrates it.

1 Steven has stilts that make him seem 4 feet taller than he really is!

ⓐ

100

s

2 Boxes of Lovitt's Lemon Cookies have four rows of cookies in them. There are 100 cookies in a box.

ⓑ

s

4

3 A football field is 100 yards long and many yards wide.

ⓒ

100

s

4 Pavarti walked 100 yards along a straight road, stopped to pet a cat, then walked a little further.

ⓓ

s

100   4

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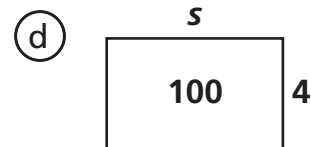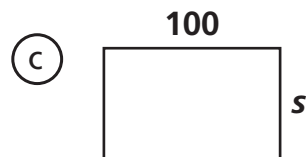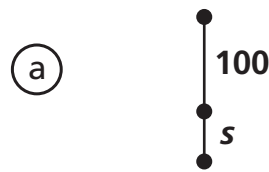
5 Draw a diagram that illustrates this situation.

Karl likes to bowl. He remembers that a lane is 42 inches wide, but he forgets how long the lane is.

Test Prep

6 Edmund is 5 years older than Felicia and 6 years older than Gil. If *E* represents Edmund's age, *F* represents Felicia's age, and *G* represents Gil's age, which equation is NOT true?

A. $E = G + 6$
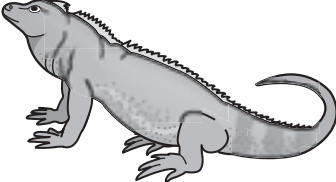
B. $F = G + 1$

C. $G = E - 6$

D. $F = E + 5$

Equations for Stories

Jackie went to the pet store to look at the iguanas and birds.

1 She noticed the animals had 24 feet all together. Complete the table to show the possible combinations of birds and iguanas.

Birds	0						
Iguanas							

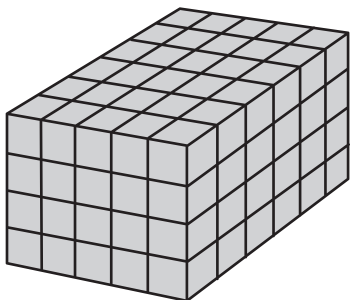**2** If there are also 18 eyes, how many of each animal was there? _____

On another day, there were _B_ birds and _I_ iguanas.

3 Write an equation that gives the number of eyes, _E_, for the birds and iguanas. _____

4 Write an equation that gives the number of feet, _F._ _____

Test Prep

5 This rectangular prism is made of 1 cm cubes. What is its volume? Explain how you found the volume.

_____

_____

_____

_____