

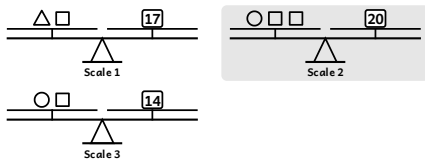


Learn a new puzzle

# Balance Puzzles

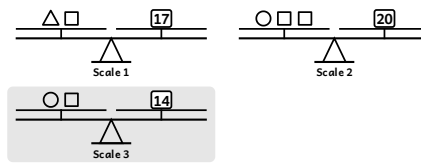
Each scale is level: both sides weigh the same. Find what each of the three shapes weighs.

Trick: **Take away, then work along**

**1**

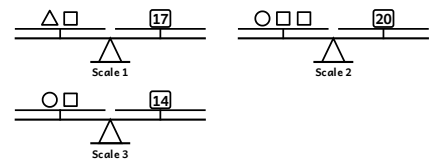
$$\square = \square \quad \circ = \square \quad \triangle = \square$$

Both sides of each scale weigh the same. Find a scale that has everything another scale has, and more.

**2**

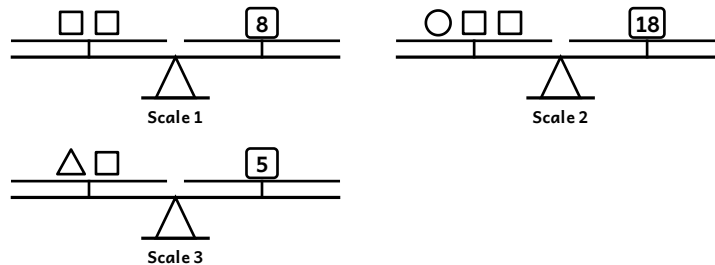
$$\square = 6 \quad \circ = \square \quad \triangle = \square$$

Take scale 3 away from scale 2: what is left, 1 square, weighs 6. So 1 square weighs 6.

**3**

$$\square = 6 \quad \circ = 8 \quad \triangle = 11$$

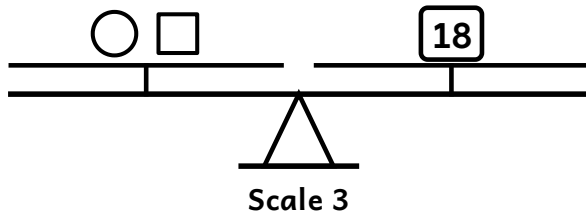
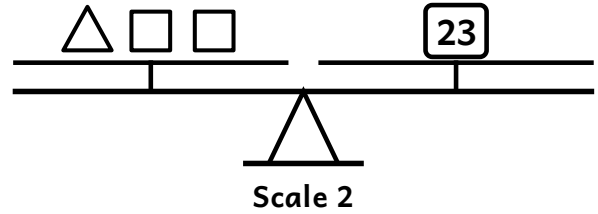
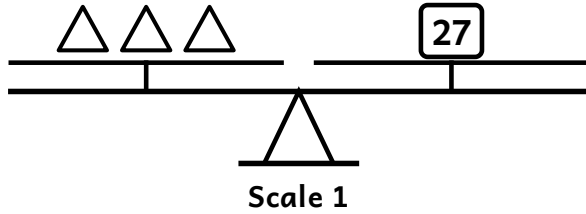
On scale 1, the square is 6, so 1 triangle weighs 11. On scale 2, the square is 6, so 1 circle weighs 8.

**Try it**

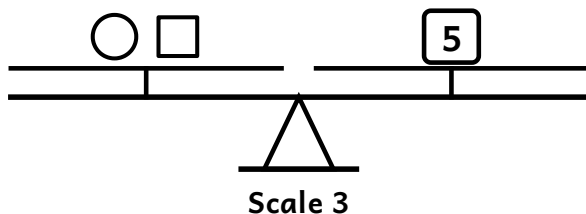
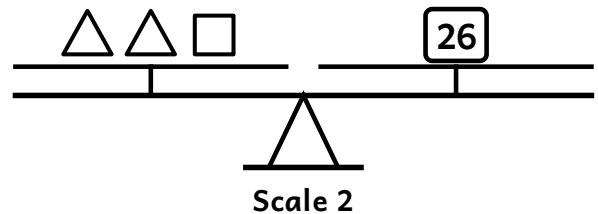
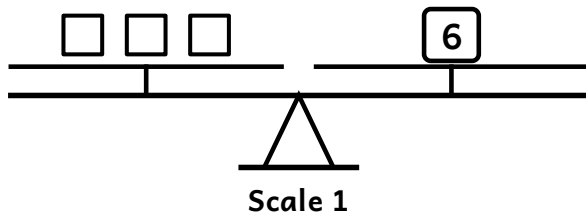
$$\square = \square \quad \circ = \square \quad \triangle = \square$$

The answer is with the other answers.

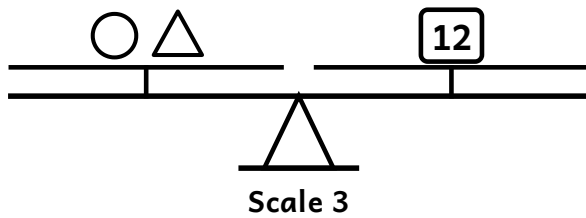
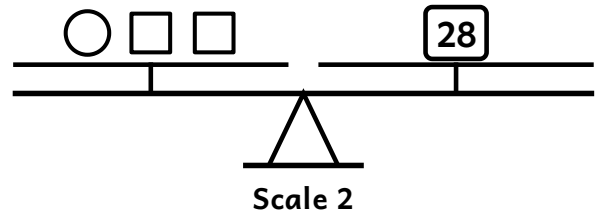
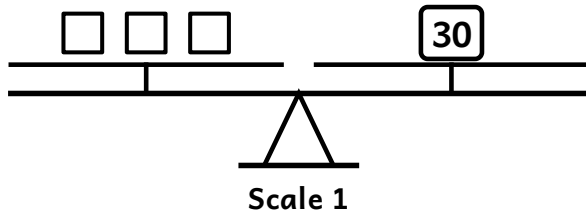
**Talk about it:** Ask: Once you know one shape, which scale tells you the next?

**1 Balance Puzzles** Each scale is level. Find what each shape weighs.

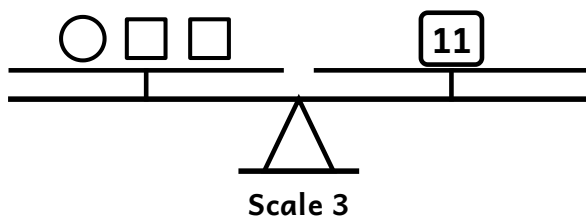
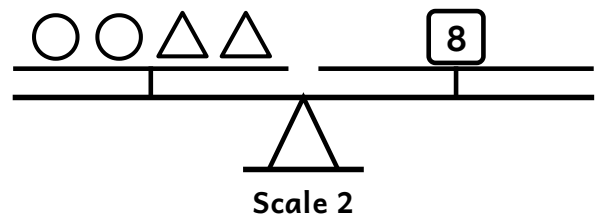
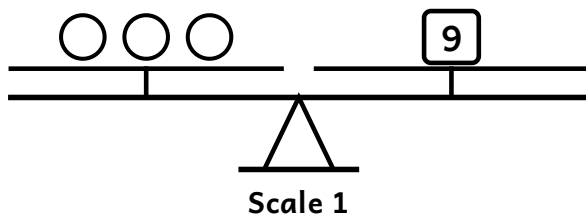
$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$

**2 Balance Puzzles** Each scale is level. Find what each shape weighs.

$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$

**3 Balance Puzzles** Each scale is level. Find what each shape weighs.

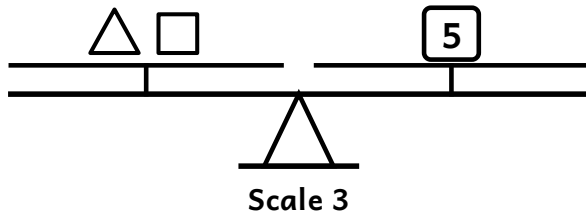
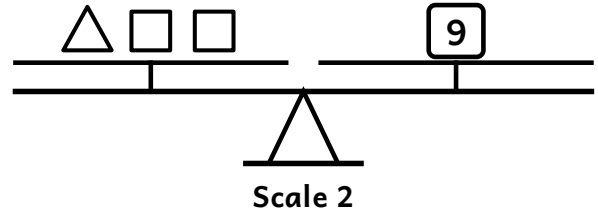
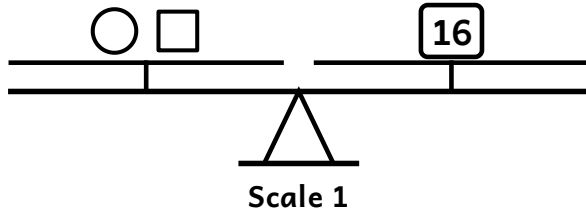
$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$

**4 Balance Puzzles** Each scale is level. Find what each shape weighs.

$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$

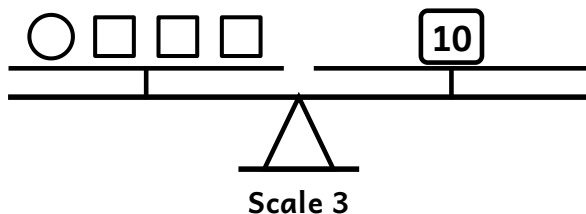
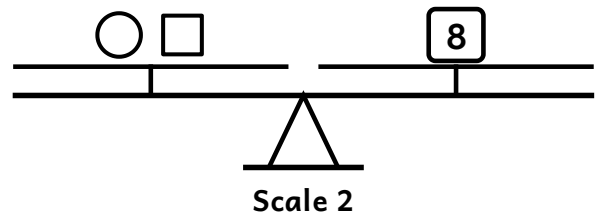
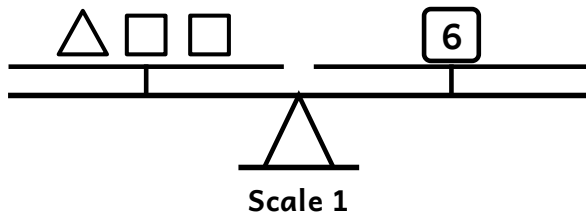


5 Balance Puzzles Each scale is level. Find what each shape weighs.



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

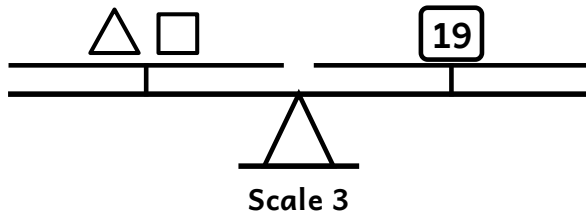
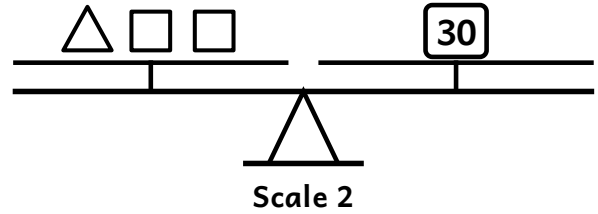
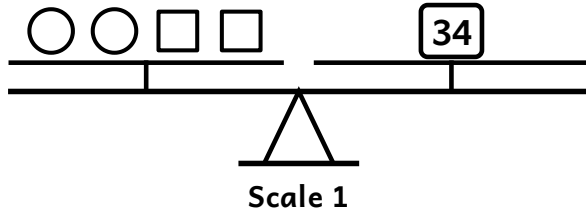
6 Balance Puzzles Each scale is level. Find what each shape weighs.



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

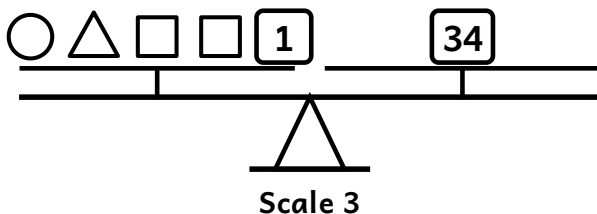
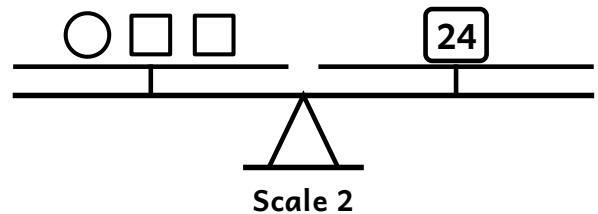
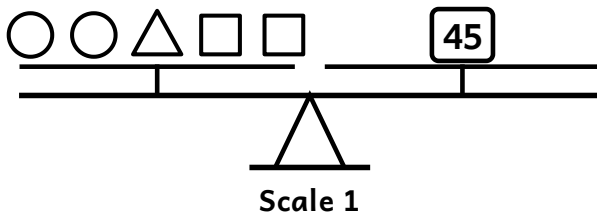


**7 Balance Puzzles** Each scale is level. Find what each shape weighs.

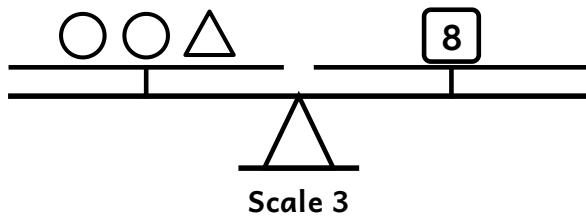
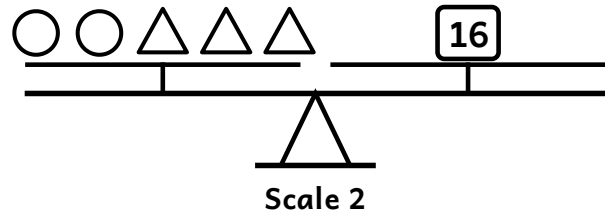
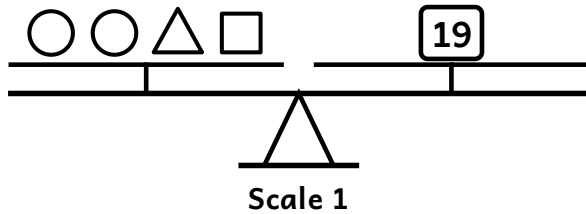


$\square = \square$      $\bigcirc = \square$      $\triangle = \square$

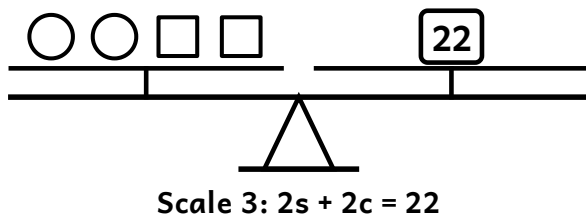
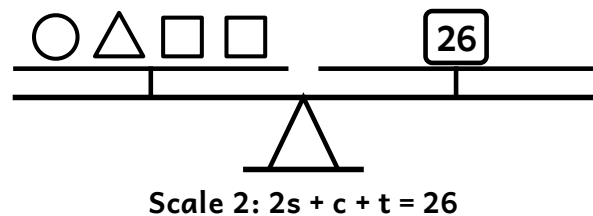
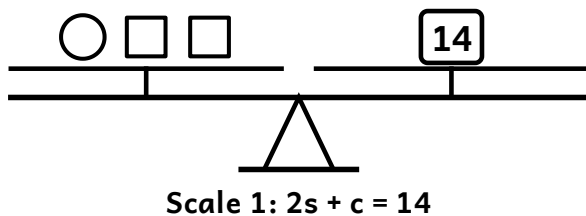
**8 Balance Puzzles** Each scale is level. Find what each shape weighs.



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

**9 Balance Puzzles** Each scale is level. Find what each shape weighs.

$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$

**10 Balance Puzzles** Each scale is level. s is a square, c a circle, t a triangle. Find what each shape weighs.

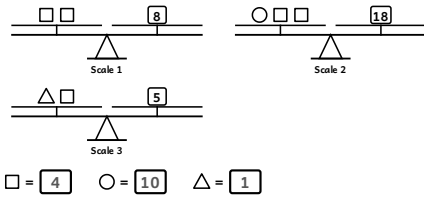
$$\square = \square \quad \bigcirc = \square \quad \triangle = \square$$



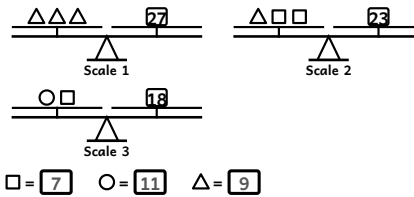
# Answers

 For grown-ups. Cut off or keep this page aside until the puzzles are done.

## Learn · Balance Puzzles

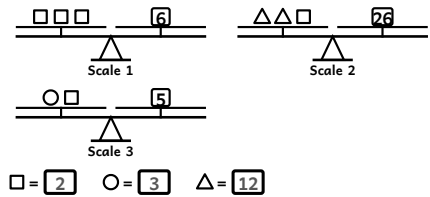


### #1



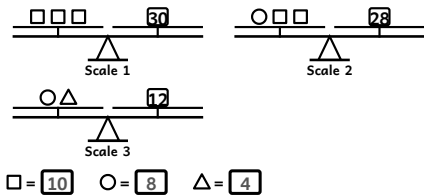
On scale 1, 3 triangles weigh 27: 1 triangle weighs  $27 \div 3 = 9$ . On scale 2, the triangle is 9, so 2 squares weigh 14: 1 square weighs  $14 \div 2 = 7$ . On scale 3, the square is 7, so 1 circle weighs 11.

### #2



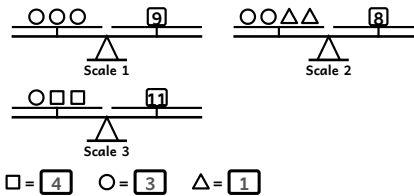
On scale 1, 3 squares weigh 6: 1 square weighs  $6 \div 3 = 2$ . On scale 2, the square is 2, so 2 triangles weigh 24: 1 triangle weighs  $24 \div 2 = 12$ . On scale 3, the square is 2, so 1 circle weighs 3.

### #3



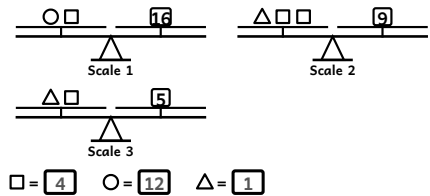
On scale 1, 3 squares weigh 30: 1 square weighs  $30 \div 3 = 10$ . On scale 2, the square is 10, so 1 circle weighs 8. On scale 3, the circle is 8, so 1 triangle weighs 4.

### #4



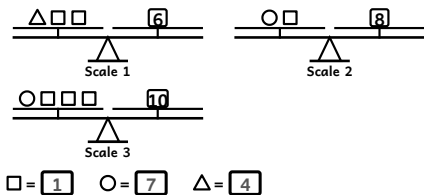
On scale 1, 3 circles weigh 9: 1 circle weighs  $9 \div 3 = 3$ . On scale 2, the circle is 3, so 2 triangles weigh 2: 1 triangle weighs  $2 \div 2 = 1$ . On scale 3, the circle is 3, so 2 squares weigh 8: 1 square weighs  $8 \div 2 = 4$ .

### #5



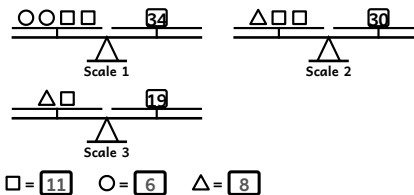
Take scale 3 away from scale 2: what is left, 1 square, weighs 4. So 1 square weighs 4. On scale 1, the square is 4, so 1 circle weighs 12. On scale 2, the square is 4, so 1 triangle weighs 1.

### #6



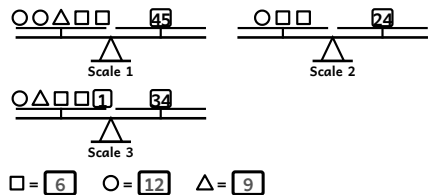
Take scale 2 away from scale 3: what is left, 2 squares, weigh 2. So 2 squares weigh 2: 1 square weighs  $2 \div 2 = 1$ . On scale 1, the square is 1, so 1 triangle weighs 4. On scale 2, the square is 1, so 1 circle weighs 7.

### #7



Take scale 3 away from scale 2: what is left, 1 square, weighs 11. So 1 square weighs 11. On scale 1, the square is 11, so 2 circles weigh 12: 1 circle weighs  $12 \div 2 = 6$ . On scale 2, the square is 11, so 1 triangle weighs 8.

### #8



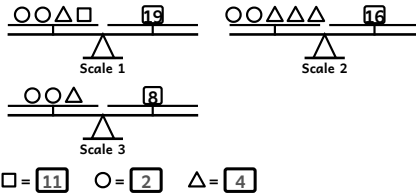
Take scale 2 away from scale 1: what is left, 1 circle + 1 triangle, weigh 21. Take scale 2 away from scale 3: what is left, 1 triangle, weighs 9. So 1 triangle weighs 9. On scale 1 take away scale 2, the triangle is 9, so 1 circle weighs 12. On scale 1, the circle is 12, the triangle is 9, so 2 squares weigh 12: 1 square weighs  $12 \div 2 = 6$ .



# Answers

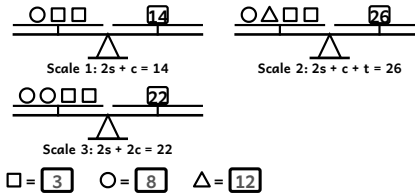
 For grown-ups. Cut off or keep this page aside until the puzzles are done.

#9



Take scale 3 away from scale 1: what is left, 1 square, weighs 11. So 1 square weighs 11. Take scale 3 away from scale 2: what is left, 2 triangles, weigh 8. So 2 triangles weigh 8: 1 triangle weighs  $8 \div 2 = 4$ . On scale 1, the triangle is 4, the square is 11, so 2 circles weigh  $19 - 4 - 11 = 4$ : 1 circle weighs  $4 \div 2 = 2$ .

#10



Take scale 1 away from scale 2: what is left, 1 triangle, weighs 12. So 1 triangle weighs 12. Take scale 1 away from scale 3: what is left, 1 circle, weighs 8. So 1 circle weighs 8. On scale 1, the circle is 8, so 2 squares weigh  $14 - 8 = 6$ : 1 square weighs  $6 \div 2 = 3$ .