

Scaling with Bars and Stories

Name: _____

Grade 5 · Pick the bar a scale factor makes, then predict and solve

How it works

A **scale factor** tells how a length changes when you multiply. A factor less than 1 makes it shorter. A factor greater than 1 makes it longer.

$\frac{1}{2} \times$ a bar is half as long as the bar. $1\frac{1}{2} \times$ a bar is the whole bar and half of it again. The small boxes help you count: the starting bar is 4 boxes long.

A. The gray bar is the starting bar. Circle the letter of the bar that shows the product.

1.

Start 

$\frac{3}{4} \times$ the starting bar

- A 
B 
C 

2.

Start 

$1\frac{1}{2} \times$ the starting bar

- A 
B 
C 

3.

Start 

$\frac{1}{2} \times$ the starting bar

- A 
B 
C 

4.

Start 

$1\frac{1}{4} \times$ the starting bar

- A 
B 
C 

B. Circle more or less before you solve. Then find the answer.

1. A recipe makes 12 muffins. Kim makes $\frac{3}{4}$ of the recipe. How many muffins does she make?

The answer will be **less** **more** than 12.

Answer: _____ muffins

2. A plant was 8 inches tall. Now it is $1\frac{1}{2}$ times as tall. How tall is it now?

The answer will be **less** **more** than 8.

Answer: _____ inches

3. A trail is 10 miles long. Dev hikes $\frac{2}{5}$ of the trail. How many miles does he hike?

The answer will be **less** **more** than 10.

Answer: _____ miles

4. Last week Ana read 20 pages. This week she read $1\frac{1}{4}$ times as many. How many pages did she read this week?

The answer will be **less** **more** than 20.

Answer: _____ pages

Scaling with Bars and Stories (Answer Key)

Grade 5 · Pick the bar a scale factor makes, then predict and solve

How it works

A **scale factor** tells how a length changes when you multiply. A factor less than 1 makes it shorter. A factor greater than 1 makes it longer.

$\frac{1}{2} \times$ a bar is half as long as the bar. $1\frac{1}{2} \times$ a bar is the whole bar and half of it again. The small boxes help you count: the starting bar is 4 boxes long.

A. The gray bar is the starting bar. Circle the letter of the bar that shows the product.

1.

Start 

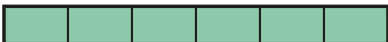
$\frac{3}{4} \times$ the starting bar

- ☒ **A** 
- ☐ **B** 
- ☐ **C** 

2.

Start 

$1\frac{1}{2} \times$ the starting bar

- ☒ **A** 
- ☐ **B** 
- ☐ **C** 

3.

Start 

$\frac{1}{2} \times$ the starting bar

- ☐ **A** 
- ☐ **B** 
- ☒ **C** 

4.

Start 

$1\frac{1}{4} \times$ the starting bar

- ☐ **A** 
- ☒ **B** 
- ☐ **C** 

B. Circle more or less before you solve. Then find the answer.

1. A recipe makes 12 muffins. Kim makes $\frac{3}{4}$ of the recipe. How many muffins does she make?

The answer will be ☒ **less** ☐ **more** than 12.

Answer: 9 muffins

2. A plant was 8 inches tall. Now it is $1\frac{1}{2}$ times as tall. How tall is it now?

The answer will be ☐ **less** ☒ **more** than 8.

Answer: 12 inches

3. A trail is 10 miles long. Dev hikes $\frac{2}{5}$ of the trail. How many miles does he hike?

The answer will be ☒ **less** ☐ **more** than 10.

Answer: 4 miles

4. Last week Ana read 20 pages. This week she read $1\frac{1}{4}$ times as many. How many pages did she read this week?

The answer will be ☐ **less** ☒ **more** than 20.

Answer: 25 pages