

NAME: _____



Purpose

To understand scale factors that are not whole numbers

Math Words

times as many

25 jumps is 2.5 times as many as 10 jumps.

.....

scale factor

A scale factor of 4.9 means almost 5 times as many.

.....

predict

You can predict about how many days it might rain in June from past June rainfall records.

.....

Starter Problem.....

On average, Jack makes 5 good skateboard jumps for every 8 tries. How many good jumps should he be expected to make in a competition of 20 tries? _____

NAME: _____

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Student Thinking

Mi Jung

The scale factor must be a decimal, since 20 tries is more than twice as many as 8 tries but not 3 times as many. I divided 20 by 8 to get the exact scale factor, 2.5. So, 2.5 times as many good jumps is 12.5. But he can't make 12.5 jumps! It'll probably be 12 or 13.



$$\frac{5 \text{ JUMPS}}{8 \text{ TRIES}} \cdot \frac{2.5}{2.5} = \frac{12.5 \text{ JUMPS}}{20 \text{ TRIES}}$$



Ray

5 divided into 20 evenly, so the scale factor is 4. Then I multiplied 4 times 8. He should make 32 good jumps.

Pitfall

$$5 \overline{)20}^4 \quad 4 \times 8 = 32 \text{ good jumps}$$

Things to Remember

- * _____
- * _____



NAME: _____

Our Turn

Think about a scale factor as you solve each problem. Decide if you can find the scale factor mentally or if you need to use division.

1. On average, Raji makes 12 good basketball shots for every 20 tries. How many shots would you expect him to make in a contest with 50 tries?

2. A lake has 8 trout fish for every 9 bass. If 34 trout were caught on the weekend, about how many bass were probably caught?

3. A Family Basics Store usually sells 3 coffee grinders for every 10 coffee pots. If 35 coffee pots will be ordered for a new store, how many coffee grinders should be ordered?

NAME: _____

My Turn

Think about a scale factor as you solve each problem. Decide if you can find the scale factor mentally or if you need to use division.

1. On average, Karen makes 3 hits for every 10 times at bat. How many hits should she be expected to make in a tournament where she has 15 times at bat?

2. A suggested mixture of oil to gasoline for a motor is 3 cans oil : 20 liters gasoline. If a large tank has 30 cans of oil, how much gasoline should be added?

3. At the Tasty Café, 4 customers out of every 10 usually order dessert. If there were 72 desserts served on Tuesday, about how many customers probably came to the Tasty Café?

NAME: _____

Multiple Choice Mini Lesson

Fill in the circle next to the answer you choose.

1. A survey showed that 3 out of 5 teenagers thought the new horror movie was scary. If 75 teenagers were interviewed for the survey, how many said it was scary?
- ☐ 25 ☐ 125 ☐ 15 ☐ 45
2. On average, Marcus makes 7 shots for every 10 attempts in basketball. About how many successful shots would he be expected to make in 25 attempts?
- ☐ 14 ☐ 17 or 18 ☐ 21 or 22 ☐ 3.5



NAME: _____

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Writing Task Mini Lesson

Explain how you know 3 cans is a reasonable answer for the following problem.
You may draw a picture to help you explain.

Mr. Beck needs at least 2 trash cans for every 8 tables in his cafeteria.
If he has 12 tables, how many trash cans does he need?

2.5 Times as Many Jumps

NAME: _____

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