ANSWER KEY

Name: _____ #: _____ Date: _____

Extra Practice: Multiplicative Comparison

1. Shannon has lived in San Diego for 3 years. Doug has lived in San Diego for <u>6 times as many</u> years. How long has Doug lived in San Diego?

Make a drawing to represent the problem:

Shannon — (3 yrs)

Doug — (3 yrs) + (3 yrs) + (3 yrs) + (3 yrs) + (3 yrs) + (3 yrs) = (18 yrs total)
(1)   (2)   (3)   (4)   (5)   (6)

Write an equation to represent the problem:
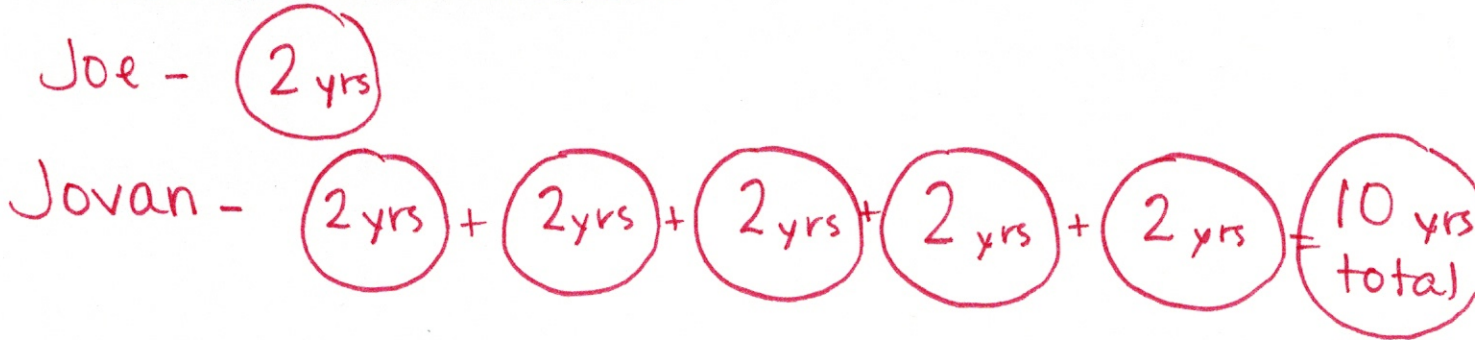
$$3 \times 6 = 18$$

<u>OR</u>

$$3 + 3 + 3 + 3 + 3 + 3 = 18$$

Answer: Doug has lived in San Diego for __18__ years.

2. Joe has been on a swim team for 2 years. Jovan has been on a swim team for 5 times as many years. How long has Jovan been on a swim team?

Make a drawing to represent the problem:

Joe - (2 yrs)

Jovan - (2 yrs) + (2 yrs) + (2 yrs) + (2 yrs) + (2 yrs) (10 yrs total)

Write an equation to represent the problem:
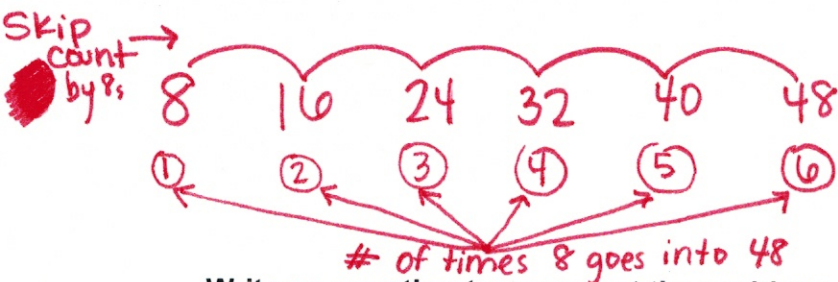
$$2 \times 5 = 10$$

OR

$$2 + 2 + 2 + 2 + 2 = 10$$

Answer: Jovan has been on a swim team for __10__ years.

3. Paul raised $48 for a local charity. Sara raised $8. How many _times as much_
   money did Paul raise than Sara?

Make a drawing to represent the problem:

Paul - $48
Sara - $8

Skip count by 8s →

8 goes into 48 evenly ⑥ times. So, Paul raised 6 times as much money as Sara.

# of times 8 goes into 48

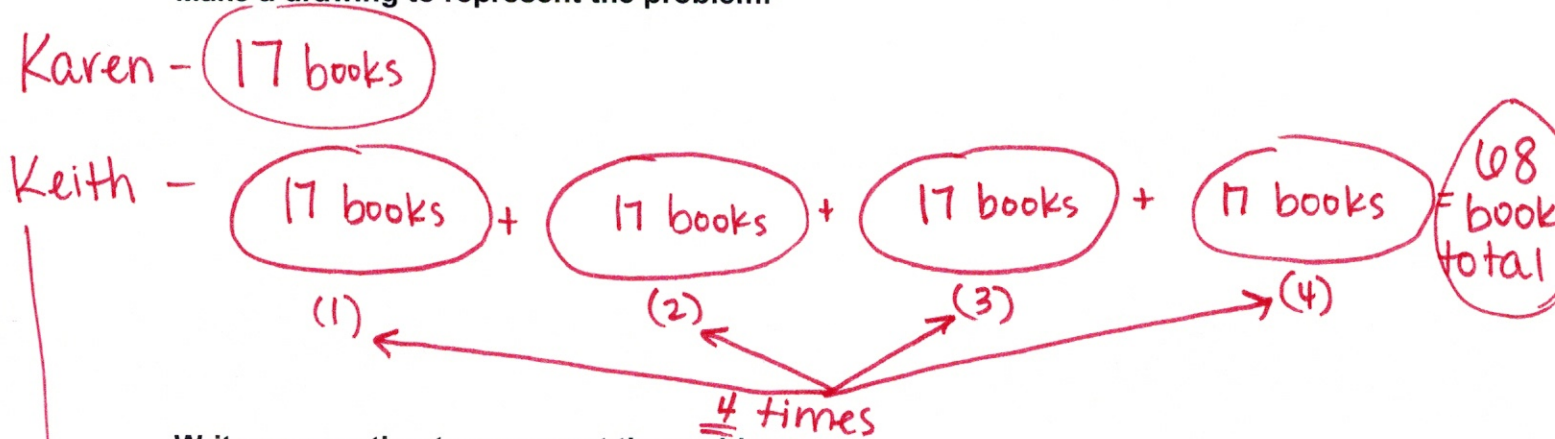**Write an equation to represent the problem:**

$$48 \div 8 = 6$$

OR

$$8 \times \,?\, = 48$$

6

Answer: Paul raised ___6___ times as much money as Sara.

4. Karen read 17 books for a reading contest. Keith read <u>4 times as many</u> books as Karen. How many books did Keith read?

Make a drawing to represent the problem:

Karen – (17 books)

Keith – (17 books) + (17 books) + (17 books) + (17 books) = (68 books total)

(1) (2) (3) (4)

<u>4</u> times

Write an equation to represent the problem:

$$17 \times 4 = 68$$

<u>OR</u>

$$17 + 17 + 17 + 17 = 68$$

Answer: Keith read __68__ books.

✳ Showing my work:

$$17 + 17 + 17 + 17 = ?$$

$$17 + 17 + 17 + 17 = 17 \times 4$$

$$17 \times 4 = ?$$

$$10 \times 4 = 40$$
$$7 \times 4 = 28$$

$$40 + 28 = 68$$

So, $17 \times 4 = 68$

<u>OR</u> :

$$17 + 17 + 17 + 17 = ?$$
Each $17 = 10 + 7$, so:

$$(10+7) + (10+7) + (10+7) + (10+7) = ?$$

$$7 + 7 + 7 + 7 = 2$$

$$10 + 10 + 10 + 10 = 40$$
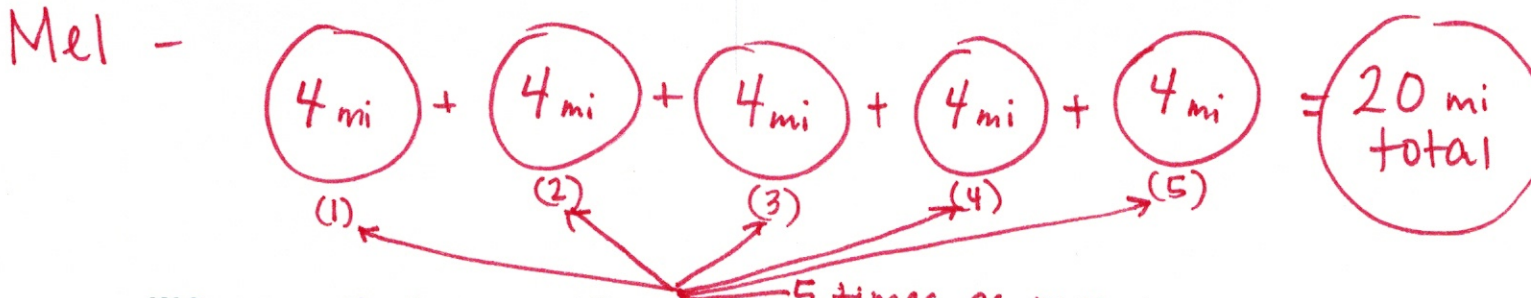
$$40 + 28 = 68$$

So, $17 + 17 + 17 + 17 = 68$

5. Mel walks <u>5 times as far</u> as Jeremy. If Jeremy walks 4 miles, how much farther does Mel walk than Jeremy?

Make a drawing to represent the problem:

Jeremy – (4 mi)

Mel –
(4 mi) + (4 mi) + (4 mi) + (4 mi) + (4 mi) = (20 mi total)
(1)   (2)   (3)   (4)   (5)

Write an equation to represent the problem: <u>5</u> times as many
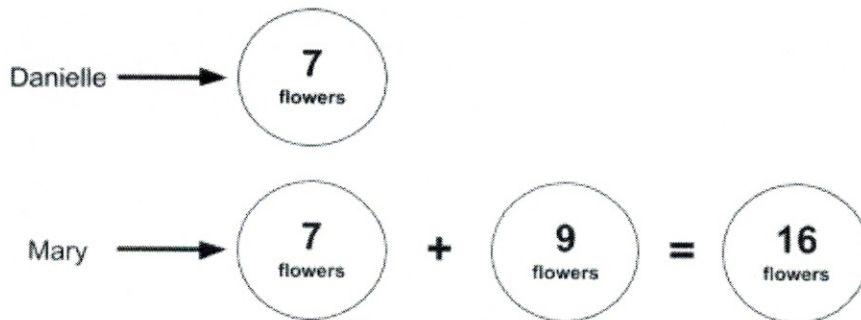
$$4 \times 5 = 20$$

<u>OR</u>

$$4 + 4 + 4 + 4 + 4 = 20$$

Answer: Mel walked __20__ more miles than Jeremy.

Look at the example below. Can you find the mistake?

6. Danielle has 7 flowers. Mary has _9 times as many_ flowers. How many flowers does Mary have?

Make a drawing to represent the problem:

Danielle ⟶ (7 flowers)

Mary ⟶ (7 flowers) **+** (9 flowers) **=** (16 flowers)

Write an equation to represent the problem:

Danielle had 7 flowers and Mary had 9 more, so Mary had 7 + 9 flowers, which equals 16 flowers total.

Equation: 7 + 9 = 16

Answer: Mary has __16__ flowers.

What was the mistake? What should this student have done instead? Explain your thinking below.

Mary has 9 <u>times as many</u> flowers as Danielle — NOT 9 <u>more</u> flowers. The student should have solved 7 × 9 = ?, NOT 7+9 = ? 7 × 9 = 63, so Mary has 63 flowers.