Grade 3 Unit 2 worksheet: Facts for three, four and six (answer key)

ANSWERS AT A GLANCE

1. (a) 27 (b) 28 (c) 24 (d) 48 (e) 36 (f) 42

2. 8 × 3 = 24; 24 wheels.

3. 8 × 4 = 32; 8 tables.

4. $9 \to 18 \to 36$; 36 leaves.

5. 8 × 3 = 24; 24 + 24 = 48 legs.

WORKED SOLUTIONS

1. Multiply.

(a) 3 × 9 (b) 4 × 7 (c) 8 × 3

(d) 6 × 8 (e) 9 × 4 (f) 7 × 6

ANSWER

(a) 27 (b) 28 (c) 24 (d) 48 (e) 36 (f) 42

SOLUTION

(a) A two fact and one more group: 18 + 9 = 27.

(b) Double 7, then double again: $7 \to 14 \to 28$.

(c) Turn it around to 3 × 8: 16 + 8 = 24.

(d) A five fact and one more group: 40 + 8 = 48.

(e) Turn it around to 4 × 9: $9 \to 18 \to 36$.

(f) Turn it around to 6 × 7: 35 + 7 = 42.

2. Mia sees 8 tricycles at the park. Each tricycle has 3 wheels. How many wheels are there?

ANSWER

8 × 3 = 24; 24 wheels.

SOLUTION

The wheels are 8 groups of 3, so 8 × 3. Turn it around: 8 × 3 = 3 × 8.

A three fact is a two fact and one more group:

$$3 \times 8 = (2 \times 8) + 8 = 16 + 8 = 24$$

There are 24 wheels.

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3. Ben sets out 32 chairs for a party. Each table gets 4 chairs. How many tables are there?

$\square \times 4 = 32$

ANSWER

8 × 4 = 32; 8 tables.

SOLUTION

The number of tables is the missing number in $\square$ × 4 = 32. Search the fours for 32.

4 × 8: double 8 is 16, and double 16 is 32. So 8 × 4 = 32.

There are 8 tables.

4. Mia draws 9 four-leaf clovers. Each clover has 4 leaves. Double 9, then double again.

$9 \rightarrow \square \rightarrow \square$

How many leaves? _____

ANSWER

$9 \rightarrow 18 \rightarrow 36$; 36 leaves.

SOLUTION

The leaves are 9 groups of 4, so 9 × 4 = 4 × 9. A four fact is a two fact doubled.

Double 9: 9 + 9 = 18. Double again: 18 + 18 = 36 (tens 10 + 10 = 20, ones 8 + 8 = 16, and 20 + 16 = 36).

The clovers have 36 leaves.

5. An ant has 6 legs, 3 on each side. Leah draws 8 ants. Fill in the blanks.

Legs on one side: 8 × 3 = _____

Legs on both sides: $\square + \square =$ _____

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ANSWER

8 × 3 = 24; 24 + 24 = 48 legs.

SOLUTION

Each ant has 3 + 3 = 6 legs, so 8 ants have 8 × 6 legs.

One side: 8 × 3 = 3 × 8 = 16 + 8 = 24. The other side has the same number.

Both sides: 24 + 24 = 48. A six fact is a three fact doubled, so 8 × 6 = 48 legs. Check: (5 × 8) + 8 = 40 + 8 = 48.

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