

5.NBT.A.2 Multiplication Patterns in Solving Products

5.NBT.A.2: Explain patterns in zeros of the product and in the placement of the decimal point.

1. Use facts and multiplication patterns to complete the multiplication sentences.

| | | | |
|---|---|--|--|
| Example $3 \times 9 = 27$ (fact) $3 \times 90 = 270$ $30 \times 900 = 27,000$ $300 \times 900 = 270,000$ | $7 \times 4 =$ $7 \times 40 =$ $700 \times 400 =$ $7 \times 4,000 =$ | $3 \times 8 =$ $3 \times 80 =$ $30 \times 800 =$ $300 \times 8,000 =$ | $4 \times 9 =$ $40 \times 90 =$ $400 \times 900 =$ $40 \times 9,000 =$ |
| $5 \times 6 =$ $50 \times 6 =$ $500 \times 600 =$ $5,000 \times 60 =$ | $9 \times 5 =$ $9 \times 50 =$ $90 \times 500 =$ $90 \times 5,000 =$ | $14 \times 3 =$ $140 \times 30 =$ $1,400 \times 30 =$ $14,000 \times 3 =$ | $5 \times 12 =$ $5 \times 120 =$ $50 \times 1,200 =$ $50 \times 12,000 =$ |

2. Use facts and multiplication patterns to find the product.

- 30×900
- 70×500
- 80×80
- $600 \times 1,500$
- $150 \times 6,000$
- $5 \times 7,000$
- $20 \times 2,200$
- $200 \times 20,000$
- $60 \times 4,000$
- $80 \times 6,000$

Answers:

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-
-
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-
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-
-

3. There are 7 rows of chairs in a mini-concert hall. Each row had 80 chairs. How many chairs are there in the mini-concert hall?

Answer:

4. A farmer planted 60 rows of seeds. Each row has 20 mango seeds and 40 maple seeds. How many seeds did the farmer plant?

Answer:

5. Harry can type 50 words in a minute. How many words can he type in 5 hours?

Answer:

6. An average of 300 customers visits an amusement park each day. Each customer was charged with a \$5 entrance fee. How much entrance fee does the park collect each day on the average?

- A. \$5,100 B. \$1,000 C. \$1,050 D. \$1,500

Answer:

7. $9,000 \times k = 54,000,000$. What is the value of k ?

- A. 6,000 B. 600 C. 60 D. 6

Answer:

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Answer Key

5.NBT.A.2: Explain patterns in zeros of the product and in the placement of the decimal point.

1. Use facts and multiplication patterns to complete the multiplication sentences.

| | | | |
|---|---|---|--|
| Example $3 \times 9 = 27$ (fact) $3 \times 90 = 270$ $30 \times 900 = 27,000$ $300 \times 900 = 270,000$ | $7 \times 4 = 28$ $7 \times 40 = 280$ $700 \times 400 = 280,000$ $7 \times 4,000 = 28,000$ | $3 \times 8 = 24$ $3 \times 80 = 240$ $30 \times 800 = 24,000$ $300 \times 8,000 = 2,400,000$ | $4 \times 9 = 36$ $40 \times 90 = 3,600$ $400 \times 900 = 360,000$ $40 \times 9,000 = 360,000$ |
| $5 \times 6 = 30$ $50 \times 6 = 300$ $500 \times 600 = 300,000$ $5,000 \times 60 = 300,000$ | $9 \times 5 = 45$ $9 \times 50 = 450$ $90 \times 500 = 45,000$ $90 \times 5,000 = 450,000$ | $14 \times 3 = 42$ $140 \times 30 = 4,200$ $1,400 \times 30 = 42,000$ $14,000 \times 3 = 42,000$ | $5 \times 12 = 60$ $5 \times 120 = 600$ $50 \times 1,200 = 60,000$ $50 \times 12,000 = 600,000$ |

2. Use facts and multiplication patterns to find the product.

- 30×900
- 70×500
- 80×80
- $600 \times 1,500$
- $150 \times 6,000$
- $5 \times 7,000$
- $20 \times 2,200$
- $200 \times 20,000$
- $60 \times 4,000$
- $80 \times 6,000$

Answers:

- 27,000
- 35,000
- 6,400
- 900,000
- 900,000
- 35,000
- 44,000
- 4,000,000
- 240,000
- 480,000

3. There are 7 rows of chairs in a mini-concert hall. Each row had 80 chairs. How many chairs are there in the mini-concert hall?

Answer:
560 chairs

4. A farmer planted 60 rows of seeds. Each row has 20 mango seeds and 40 maple seeds. How many seeds did the farmer plant?

Answer:
3,600 seeds

5. Harry can type 50 words in a minute. How many words can he type in 5 hours?

Answer:
15,000 words

6. An average of 300 customers visits an amusement park each day. Each customer was charged with a \$5 entrance fee. How much entrance fee does the park collect each day on the average?

- A. \$5,100 B. \$1,000 C. \$1,050 D. \$1,500

Answer:
D. \$1,500

7. $9,000 \times k = 54,000,000$. What is the value of k ?

- A. 6,000 B. 600 C. 60 D. 6

Answer:
A. 6,000