

Squares and Square Roots

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. Find the square of 3.
a. 12 b. 6 c. 9 d. 18
- _____ 2. Find a square root of 64.
a. 32 b. 8 c. 16 d. 32
- _____ 3. Find $\sqrt{144}$.
a. 12 b. 72 c. 36 d. 48
- _____ 4. Find 8^2 .
a. 8 b. 64 c. 16 d. 32
- _____ 5. Find the square of $\sqrt{49}$.
a. 196 b. 7 c. 2401 d. 49
- _____ 6. Find the number whose square root is 36.
a. 6 b. 24 c. 1296 d. 144

Short Answer

7. Find a square root of 900.
8. Order from least to greatest: 5^2 , 4^2 , $\sqrt{289}$, 19

Problem

9. Find the square of each number.
a) 8
b) 9
c) 7
10. Find the number whose square root is 17. Explain your strategy.

Squares and Square Roots

Answer Section

MULTIPLE CHOICE

- | | | | |
|------------------------|-----------------------|--|-----------------------------------|
| 1. ANS: C
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Easy
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |
| 2. ANS: B
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Easy
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |
| 3. ANS: A
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Easy
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |
| 4. ANS: B
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Easy
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |
| 5. ANS: D
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Moderate
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |
| 6. ANS: C
LOC: 8.N1 | PTS: 1
TOP: Number | DIF: Moderate
KEY: Conceptual Understanding | REF: 1.2 Squares and Square Roots |

SHORT ANSWER

7. ANS:
30
- | | | |
|---------------------|------------------------------|--|
| PTS: 1
LOC: 8.N1 | DIF: Moderate
TOP: Number | REF: 1.2 Squares and Square Roots
KEY: Conceptual Understanding |
|---------------------|------------------------------|--|
8. ANS:
 $4^2, \sqrt{289}, 19, 5^2$
- | | | |
|---------------------|------------------------------|--|
| PTS: 1
LOC: 8.N1 | DIF: Moderate
TOP: Number | REF: 1.2 Squares and Square Roots
KEY: Conceptual Understanding |
|---------------------|------------------------------|--|

PROBLEM

9. ANS:
- a) The square of 8 is: $8^2 = 8 \times 8$
 $= 64$
- b) The square of 9 is: $9^2 = 9 \times 9$
 $= 81$
- c) The square of 7 is: $7^2 = 7 \times 7$
 $= 49$
- | | | |
|---------------------|------------------------------|--|
| PTS: 1
LOC: 8.N1 | DIF: Moderate
TOP: Number | REF: 1.2 Squares and Square Roots
KEY: Conceptual Understanding |
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10. ANS:

~~To find the number whose square root is 17, find the square of 17.~~

The square of 17 is: $17^2 = 17 \times 17$
 $= 289$

The number whose square root is 17 is 289.

PTS: 1

DIF: Difficult

REF: 1.2 Squares and Square Roots

LOC: 8.N1

TOP: Number

KEY: Communication | Problem-solving Skills