Powers and roots

Name: _____ Date: _____



Mr Boston says: 3^2 is 9, not 6! Squaring means multiplying by itself, not by 2.

A. Squares and cubes

1 13^2 =
Answer: _____

2 9^2 =
Answer: _____

3 12^2 =
Answer: _____

4 15^2 =
Answer: _____

5 2^3 =
Answer: _____

6 3^3 =
Answer: _____

B. Roots

7 $\sqrt{36}$ =
Answer: _____

8 $\sqrt{225}$ =
Answer: _____

9 $\sqrt{196}$ =
Answer: _____

10 $\sqrt{81}$ =
Answer: _____

11 $\sqrt[3]{27}$ =
Answer: _____

12 $\sqrt[3]{1000}$ =
Answer: _____

C. Powers and index laws

13 2^6 =
Answer: _____

14 10^4 =
Answer: _____

15 $3^2 + 4^2$ =
Answer: _____

16 $\sqrt{64} + 2^3$ =
Answer: _____

17 Write $5^3 \times 5^4$ as a single power of 5.
Answer: _____

18 Write $7^9 \div 7^3$ as a single power of 7.
Answer: _____

19 Write $(2^3)^2$ as a single power of 2.
Answer: _____

20 Which square numbers are between 50 and 100?
Answer: _____

Answers for grown-ups

Powers and roots

1. 13^2 = → **169**
2. 9^2 = → **81**
3. 12^2 = → **144**
4. 15^2 = → **225**
5. 2^3 = → **8**
6. 3^3 = → **27**
7. $\sqrt{36}$ = → **6**
8. $\sqrt{225}$ = → **15**
9. $\sqrt{196}$ = → **14**
10. $\sqrt{81}$ = → **9**
11. $\sqrt[3]{27}$ = → **3**
12. $\sqrt[3]{1000}$ = → **10**
13. 2^6 = → **64**
14. 10^4 = → **10,000**
15. $3^2 + 4^2$ = → **25**
16. $\sqrt{64} + 2^3$ = → **16**
17. Write $5^3 \times 5^4$ as a single power of 5. → **5^7**
18. Write $7^9 \div 7^3$ as a single power of 7. → **7^6**
19. Write $(2^3)^2$ as a single power of 2. → **2^6**
20. Which square numbers are between 50 and 100? → **64 and 81**