Year 8 Integers, Powers and Roots – Mixed Practice

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Year 8 · Maths · Integers, Powers and Roots · Mixed practice · 30 questions

Name _____ **Date** _____

A. Mixed practice (mixed order)

1. Write $5^4 \times 5^4$ as a single power of 5.

Answer _____

2. Work out $6^2 \div (-4) + \sqrt[3]{27}$.

Answer _____

3. Find n: $7^5 \times 7^n = 7^{14}$

Answer _____

4. Work out $38 \times (-14)$.

Answer _____

5. Write $3^4 \times 3^2$ as a single power of 3.

Answer _____

6. Work out $(-13)^2$.

Answer _____

7. Work out $\sqrt[3]{(-27)}$.

Answer _____

8. Dina says $(-6)^2 = -36$. Spot the mistake and give the correct answer.

Answer _____

9. Work out $4^2 \times 13^0 + 10^2$.

Answer _____

10. Farah says every rational number is an integer. Is Farah right? Explain.

Answer _____

11. Work out -5^2 and $(-5)^2$.

Answer _____

12. Work out $43 \times (-13)$.

Answer _____

13. Here are five numbers: 0.75, 0.4, 12, −4, 5. Which of them are natural numbers? (All of them are rational numbers.)

Answer _____

14. Find n: $3^2 \times 3^n = 3^{16}$

Answer _____

15. Work out $3 \times (-5)^2 - \sqrt[3]{125}$.

Answer _____

16. A square courtyard has an area of 576 m². How long is each side? Explain why the answer cannot be −24 m.

Answer _____

17. Work out $(-2)^3$.

Answer _____

18. Write $7^{10} \div 7^9$ as a single power of 7.

Answer _____

19. Work out $(-3)^2 + 4 \times \sqrt{25}$.

Answer _____

20. Work out $\sqrt[3]{512} + \sqrt[3]{(-512)}$.

Answer _____

21. Work out $2^3 + 7^0 - 2^2$.

Answer _____

22. Work out $(-1)^2$, $(-1)^3$, $(-1)^4$ and $(-1)^5$. Write a rule for the value of $(-1)^n$.

Answer _____

23. Work out -26×38.

Answer _____

24. Write down both square roots of 64.

Answer _____

25. Chen says $2^3 \times 2^4 = 4^7$. Is Chen right? Explain.

Answer _____

26. Find n: $9^{16} \div 9^n = 9^9$

Answer _____

27. Write $10^2 \times 10^3 \div 10^1$ as a single power of 10. Answer _____

28. Here are five numbers: 12, −4, −1/3, 5, 7. Which of them are natural numbers? (All of them are rational numbers.)

Answer _____

29. Eli says $(-7)^2 = -49$. Spot the mistake and give the correct answer.

Answer _____

30. A freezer is at −15 °C. A science freezer is 2 times as cold (in °C). What is its temperature? How many degrees colder is it?

Answer _____