

Radicals and Exponential Functions: math test, Grade 9 – download the PDF

Suggested time: 45 minutes. Out of 20 points. Calculator allowed only when the problem says so.

1 Simplifying radicals

/ 4 pts

Simplify each radical.

- a. $\sqrt{45}$
- b. $\sqrt{128}$
- c. $5\sqrt{12}$
- d. $\sqrt{18} \cdot \sqrt{2}$

2 Operations with radicals

/ 4 pts

Simplify each expression.

- a. $7\sqrt{3} - 2\sqrt{3} + \sqrt{12}$
- b. $(2 + \sqrt{6})(2 - \sqrt{6})$
- c. $(\sqrt{3} + 4)^2$

3 Rationalizing

/ 3 pts

Rationalize each denominator.

a. $\frac{12}{\sqrt{6}}$

b. $\frac{8}{3 - \sqrt{5}}$

4 A growing app

/ 3 pts

A calculator is allowed. A streaming app has 8,000 users and grows 15% each month.

- Write a function $U(t)$ for the number of users after t months.
- How many users are there after 4 months? Round to a whole number.

5 Compound interest

/ 3 pts

A calculator is allowed. You deposit \$2,500 at 3% interest compounded annually for 6 years. Find the final balance and the interest earned, to the nearest cent.

6 Identifying a model

/ 3 pts

The table shows values of a function.

x	0	1	2	3
y	4	12	36	108

(a) Is the function linear or exponential? Justify. (b) Write an equation. (c) Find y when $x = 5$

.



Test yourself: quick challenge for Grade 9

[Change level](#)

Level : **Grade 9**

6 random questions, instant feedback.



Start the challenge



Keep exploring with Zyro



Test solutions

Radicals and Exponential Functions:
math test solutions, Grade 9



Math lessons

Radicals and Exponential Functions:
math lesson, Grade 9



Math practice



Test solutions

Radicals and Exponential Functions:
math practice, Grade 9

Algebraic Expressions and Properties of
Real Numbers: math test solutions,
Grade 9

 **Test solutions**

Linear Inequalities: math test solutions,
Grade 9

 **Math lessons**

Algebraic Expressions and Properties of
Real Numbers: math lesson, Grade 9

Zyro vous emmène sur nos sites partenaires

Embarquez pour d'autres planètes du savoir et leurs applis.

Décollage