

Exponent rules and exponential equations
10 Questions

1. Anything raised to the power 0 is...

 A

1

 B

0, but only if the base is not 1

 C

1, but only if the base is not 1

 D

1, but only if the base is not 0

 E

0

2. $x^3 \cdot x^2 : x^6$ equals to...

 A

1

 B

x

 C

it is not possible to calculate it

 D $\frac{1}{x}$

3. Compute: $(2^4 \cdot 4^{-3})^{-2}$

 A 2^4 B 2^{-2} C 2^{-4} D 2^2

4. In the expression $(3x)^{2a-1}$, $3x$ is the ...

5. To simplify $6^3 : 2^3$ you can

 A

subtract the exponents

 B

subtract the bases

 C

divide the bases

 D

divide the bases and subtract the exponents

 E

do nothing: you can not simplify this expression

6. Solve: $7^{-x} = 49$

7. To solve $4^{x+1} = 64$ you rewrite 64 as...

A 8^2

B 4^3

C 2^6

D $4 \cdot 16$

8. Solve for x: $3^{3-x} = 81^x$

9. Solve for t: $5^{3t+1} = \frac{1}{25}$

10. Solve: $4^x \cdot 3^{2x} = 6^4$

A $x=1$

B $x=0$

C $x=2$

D None of the other solutions is correct

Answer Key

1. d

2. d

3. a

4. base

5. c

6. -2

7. b

8. $\frac{3}{5}$

9. -1

10. c