

Algebra 2 Common Core  
Day 32 Variable Exponents

Name \_\_\_\_\_

Date \_\_\_\_\_

Simplify.

1.  $a^x a^y$

2.  $x^a \cdot x^b$

3.  $10^x \cdot 10^x \cdot 10^x$

4.  $y^a y^{3a}$

5.  $10^y \cdot 10$

6.  $10 \cdot 10^{n-1}$

7.  $x^{2a-b} \cdot x^{2a+b}$

8.  $[(2^a)^b]^c$

9.  $[(y^m)^3]^r$

10.  $(y^6)^a$

11.  $(y^{n+1})^2$

12.  $\frac{a^x}{a}$

13.  $\frac{y^5}{y^a}$

14.  $\frac{x^{3n}}{x^n}$

15.  $\frac{m^{3a-1}}{m^{3a-2}}$

16.  $\frac{a}{a^x a^y}$

17.  $\frac{m^{2x}}{(m^x)(m)}$

18.  $\frac{(a^{x+1})^3}{(a^x)^2 (a^{x-2})}$

19.  $\left(\frac{(a^n)^2 (a^{n+1})}{(a^2)}\right)^3$

1.  
Answer:  $a^{x+y}$   
CodePath: EAS.ALG.B.F.1
2.  
Answer:  $x^{a+b}$   
CodePath: EAS.ALG.B.F.2
3.  
Answer:  $10^{3x}$   
CodePath: EAS.ALG.B.F.5
4.  
Answer:  $y^{4a}$   
CodePath: EAS.ALG.B.F.6
5.  
Answer:  $10^{y+1}$   
CodePath: EAS.ALG.B.F.10
6.  
Answer:  $10^n$   
CodePath: EAS.ALG.B.F.12
7.  
Answer:  $x^{4a}$   
CodePath: EAS.ALG.B.F.14
8.  
Answer:  $2^{abc}$   
CodePath: EAS.ALG.B.F.17
9.  
Answer:  $y^{3mr}$   
CodePath: EAS.ALG.B.F.19
10.  
Answer:  $y^{6a}$   
CodePath: EAS.ALG.B.F.23
11.  
Answer:  $y^{2n+2}$   
CodePath: EAS.ALG.B.F.27
12.  
Answer:  $a^{x-1}$   
CodePath: EAS.ALG.B.F.33
13.  
Answer:  $y^{5-a}$   
CodePath: EAS.ALG.B.F.36
14.  
Answer:  $x^{2n}$   
CodePath: EAS.ALG.B.F.37

15.  
Answer:  $m$   
CodePath: EAS.ALG.B.F.43
16.  
Answer:  $a^{1-x-y}$   
CodePath: EAS.ALG.B.F.46
17.  
Answer:  $m^{x-1}$   
CodePath: EAS.ALG.B.F.51
18.  
Answer:  $a^5$   
CodePath: EAS.ALG.B.F.54
19.  
Answer:  $a^{9n-3}$   
CodePath: EAS.ALG.B.F.60