

Simplify the following.

1. $\frac{a^{-3}b^4c^0}{a^2b^3c}$

2. $\frac{3^8 \cdot 3^{-6}}{3^3}$

3. $2^{-4} \cdot 2^7 \cdot 2^{-5} \cdot 2 \cdot 2^{-2}$



Solve the following for the indicated variable.

4. $x^2 = 144$

5. $p^3 = 216$

6. $m^3 = -1$



Determine how many times as great Quantity A is compared to Quantity B.

7. Quantity A: 6×10^9
Quantity B: 3×10^7

8. Quantity A: 7×10^{15}
Quantity B: 7×10^9

9. Quantity A: 8×10^2
Quantity B: 4×10^{-2}



Evaluate the following. Express answers in scientific notation.



10. $9.3 \times 10^6 - 6,000,000$

11. $(5,400)(6 \times 10^5)$

12. $\frac{3.2 \times 10^4}{6.4 \times 10^7}$

Determine the slope AND rate of change of each relation.

13.

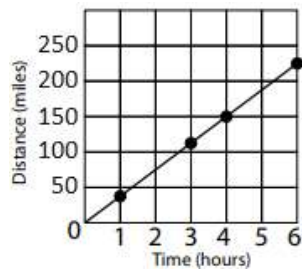
Number of Avocados	Cost (\$)
2	2.40
4	4.80
6	7.20
8	9.60

14. $n = 17.5h$

n is total amount earned (in \$)

h is number of hours spent babysitting

15.

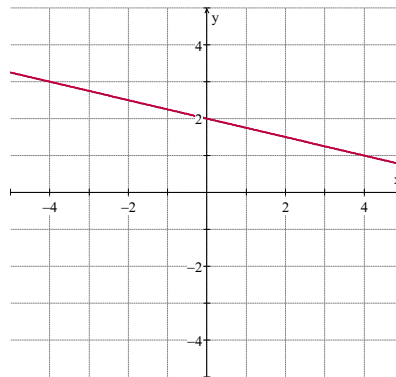


Determine the slope & y-intercept of each relation.



16. $y = 2x - 3$

17.



18.

x	y
0	-4
1	-7
2	-10
3	-13