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"What button won't you find in a tailor's shop?"

Simplify the following expressions. The answer to each problem will match a letter that will allow you to figure out the joke.

1. $(8)^2$

L: 0.001

2. $(-4)^3$

T: $\frac{1}{36}$

3. $\left(-\frac{1}{6}\right)^2$

B: $\frac{9}{16}$

4. $\left(\frac{1}{3}\right)^4$

C: 0.1

5. $(-1)^9$

O: $\frac{1}{81}$

6. $(0.1)^3$

U: -64

7. $\left(\frac{2}{3}\right)^3$

Y: -32

8. $\left(\frac{-3}{4}\right)^2$

I: $\frac{1}{1296}$

N: 0.01

9. $(-2)^5$

L: 64

10. $(-0.1)^2$

D: -16

11. $\left(\frac{-1}{6}\right)^3$

B: $\frac{-1}{216}$

E: -1

T: $\frac{8}{27}$

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11 5 1 6 9 8 2 7 3 4 10

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"What do mechanics charge to fix tires?"

Solve the systems of equations by graphing.

The answer to each problem will match a letter that will allow you to figure out the joke.

1. $y = -3$
 $y = -2x + 1$ A. (2,-2)
 D. (3,3)
2. $y = 2x + 7$
 $x = -3$ T. (-3,1)
 I. (4,-2)
3. $y = x + 3$
 $y = 2x$ R. (2,1)
 E. (1,1)
4. $y = -x + 2$
 $y = 3x - 2$ N. (2,0)
 W. (0,0)
5. $y = x - 4$
 $y = -x$ F. (5,1)
 A. (2,-3)
6. $3x + 2y = 6$
 $x + 3y = 9$ M. (2,-5)
 L. (0,3)
7. $2x - 5y = -1$
 $3x - 4y = 2$ J. (5,5)
 T. (3,6)
8. $-2x + y = -9$
 $x - 3y = 2$ Y. (-8,4)

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"How do you get a baby astronaut to go to sleep?"

Write each expression as a single logarithm. The answer to each problem will match a letter that will allow you to figure out the joke.

1. $\log_3 x + \log_3 y$

D: $\log_4(x - 8)$

2. $\log_4 x - \log_4 y$

O: $\log_3 x^7$

K: $\log_4 x^3 y^3$

3. $7\log_3 x$

S: $\log_3 x^6$

E: $\log_4 \left(\frac{x}{y} \right)$

4. $3\log_3 x + 2\log_3 x$

C: $\log_3 x^5$

5. $4\log_4 x - 3\log_4 y - \log_4 z$

Y: $\log_4(x^2 - 4)$

6. $\frac{1}{2} \log_3 x + 6\log_3 y$

O: $\log_3 xy$

A: $\log_4 \left(\frac{1}{xy} \right)$

7. $3(\log_4 x + \log_4 y)$

U: $\log_3 y^6 \sqrt{x}$

R: $\log_3 \left(\frac{x^2 - 2x + 1}{x} \right)$

8. $\log_4(x + 2) + \log_4(x - 2)$

W: $\log_4 x^6 y$

9. $2\log_3(x - 1) - \log_3 x$

T: $\log_4 \frac{x^4}{y^3 z}$

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Answer: _____