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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. $(8)^2$
2. $(-4)^3$
3. $\left(-\frac{1}{6}\right)^2$
4. $\left(\frac{1}{3}\right)^4$
5. $(-1)^9$
6. $(0.1)^3$
7. $\left(\frac{2}{3}\right)^3$
8. $\left(\frac{-3}{4}\right)^2$
9. $(-2)^5$
10. $(-0.1)^2$
11. $\left(\frac{-1}{6}\right)^3$

L: 0.001

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

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

C: 0.1

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

U: -64

Y: -32

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

N: 0.01

L: 64

D: -16

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

E: -1

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

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. $y = -3$
   $y = -2x + 1$

2. $y = 2x + 7$
   $x = -3$

3. $y = x + 3$
   $y = 2x$

4. $y = -x + 2$
   $y = 3x - 2$

5. $y = x - 4$
   $y = -x$

6. $3x + 2y = 6$
   $x + 3y = 9$

7. $2x - 5y = -1$
   $3x - 4y = 2$

8. $-2x + y = -9$
   $x - 3y = 2$

A. (2,-2)

D. (3,3)

T. (-3,1)

I. (4,-2)

R. (2,1)

E. (1,1)

N. (2,0)

W. (0,0)

F. (5,1)

A. (2,-3)

M. (2,-5)

L (0,3)

J. (5,5)

T. (3,6)

Y. (-8,4)

___	___	___	___	___	___	___	___	___
1	8	6	5	3	7	5	2	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. $\log_3 x + \log_3 y$
2. $\log_4 x - \log_4 y$
3. $7\log_3 x$
4. $3\log_3 x + 2\log_3 x$
5. $4\log_4 x - 3\log_4 y - \log_4 z$
6. $\frac{1}{2}\log_3 x + 6\log_3 y$
7. $3(\log_4 x + \log_4 y)$
8. $\log_4 (x + 2) + \log_4 (x - 2)$
9. $2\log_3 (x - 1) - \log_3 x$

D: $\log_4 (x - 8)$

O: $\log_3 x^7$

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

S: $\log_3 x^6$

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

C: $\log_3 x^5$

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

O: $\log_3 xy$

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

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

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

W: $\log_4 x^6y$

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

8	3	6		9	1	4	7	2	5

Answer: _____