

What's Going On?

Checking In

Minds on

Learning Goal Log

Action!

Taking Up Some Questions

Consolidation

Jeopardy!

Learning Goal - I will be ready for tomorrow's test!

Minds on **LGL**

Copy and complete this question on a new page in your LGL. Use TODAY'S date and

Learning Goal - I will be ready for tomorrow's test!

Identify the mistake that was made in the solution given below. Then, provide the correct answer!

Expand!

$$3x^2(4x^3 - 5x^2 + 2x - 6)$$
$$= 12x^5 - 5x^2 + 2x - 6$$

Minds on

LGL

Expand!

$$3x^2(4x^3 - 5x^2 + 2x - 6)$$
$$= 12x^5 - 5x^2 + 2x - 6$$

They only multiplied by the first term in the brackets! They needed to distribute the term all the way through the brackets!

$$= 12x^5 - 15x^4 + 6x^3 - 18x^2$$

Action!

Taking Up the Quiz

What is the value of $5x^3y^2$ when $x = 2$ and $y = 4$?

a 240

b 320

c 480

d 640

$$= 5(2)^3(4)^2$$

$$= 5 \times 8 \times 16$$

$$= 640$$

What value of m makes the equation

$$\frac{6a^m}{2a^3} = 3a^5 \text{ true?}$$

a 2

b 8

~~c 15~~

d 18

Quotient Rule!

What is the value of $(x^2)^3$ when $x = \frac{1}{2}$?

a $\frac{1}{4}$

b $\frac{1}{12}$

c $\frac{1}{32}$

d $\frac{1}{64}$

$$x^6$$

$$\left(\frac{1}{2}\right)^6 = \frac{1}{64}$$

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

$$\left(\frac{1}{4}\right)^3 = \frac{1}{64}$$

What is the value of $6x^2$ when $x = \frac{1}{3}$?

a $\frac{2}{9}$

b $\frac{2}{3}$

c 2

d 4

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

$$= 6\left(\frac{1}{9}\right)$$

$$= \frac{6}{9} = \frac{2}{3}$$

~~$\frac{2}{9}$~~

What exponent goes in the box to make the following equation true?

$$\frac{x^{\square}x^6}{x^2} = x^{12}$$

$$x^{\boxed{8}}x^4$$

$$8 + 6 - 2 = 12$$

a 9

b 8

~~c 4~~

d 3

Mistake: $\frac{4 \times 6}{2} = 12$

The expression below can be simplified.

$$\frac{(x^2y)^3}{(xy)^2} = \frac{x^6y^3}{x^2y^2} = x^4y^1$$

Which of the following shows the expression in its simplest form?

- a** x^4y
- b** x^4
- c** xy
- d** x^3y

The sum of the perimeters of two shapes is represented by $13x + 4y$.

The perimeter of one shape is represented by $4x - 2y$.

Which expression represents the perimeter of the other shape?

a $9x + 2y$

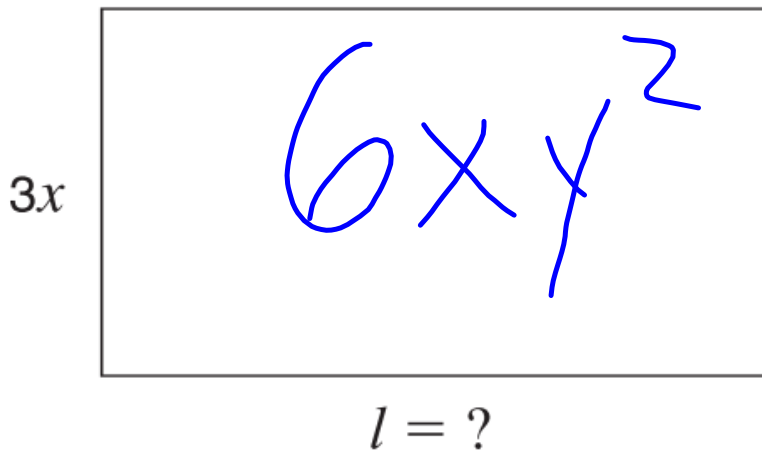
b $9x + 6y$

c $17x + 2y$

d $17x + 6y$

$$\begin{aligned} & (13x + 4y) - (4x - 2y) \\ &= 13x + 4y - 4x + 2y \\ &= 9x + 6y \end{aligned}$$

The area of the rectangle shown below is $6xy^2$ square units.



Hint: $A = lw$

If the width is $3x$ units, which expression represents the length of the rectangle?

a $2xy^2$ units ★

b $2y^2$ units

c $3xy^2$ units

d $3y^2$ units ★

$$3x \cdot 2xy^2 = 6x^2y^2$$

Consider the expression below.

$$3x^2(5x^2 - 2x + 1)$$

Which of the following is equivalent to this expression?

a $8x^2 - 2x + 1$

b $8x^2 + x + 4$

c $15x^4 - 2x + 1$ ★

d $15x^4 - 6x^3 + 3x^2$

What is the value of the expression x^2
when $x = \frac{4}{5}$?

a $\frac{8}{5}$

b $\frac{8}{10}$ ★

c $\frac{16}{5}$ ★

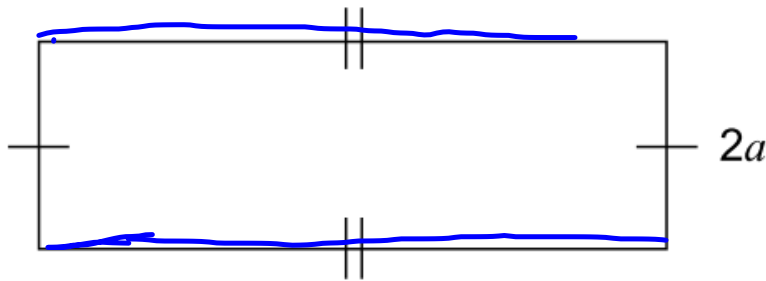
d $\frac{16}{25}$

$$\left(\frac{4}{5}\right)^2$$

$$\frac{4^2}{5^2} = \frac{16}{25}$$

$$\left(\frac{4}{5}\right)\left(\frac{4}{5}\right) = \frac{16}{25}$$

A rectangular field has a **perimeter** of $(10a - 6)$ metres and a width of $2a$ metres.



$$\frac{10a - 6}{2}$$

$$\frac{5a - 3}{1}$$

$$5a - 3$$

Which expression represents the **length** of this field?

~~A~~ $8a - 6$ ★

B $12a - 6$

C $3a - 3$ ←

D $3a^2 - 3$

Which of the expressions below is equivalent to $3(4x - 5) - 7(9x - 2)$?

a $-51x - 1$ ✘

b $-51x - 3$

c $-51x - 7$ ★

~~d $-51x - 29$ ★~~

$12x - 5 - 63x + 14$
 $-51x - 7$

$-15 + 14 = 75x$

 Consolidation

Jeopardy