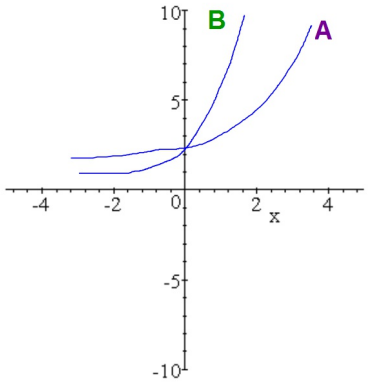
1.

Without using a graphing caculator sketch these two graphs together.

A $y = 2 \cdot 3^x$

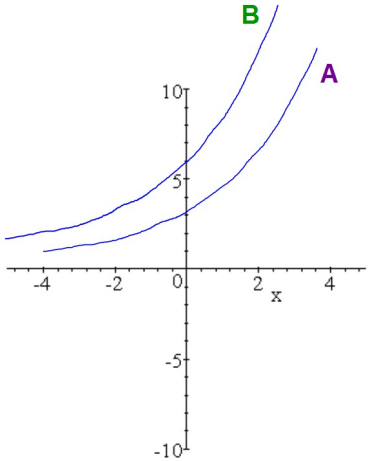
B $y = 2 \cdot 8^x$



2.

A $y = 3 \cdot 2^x$

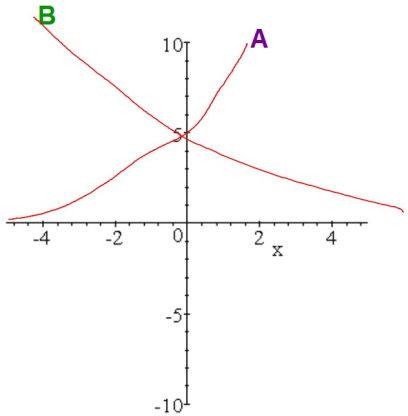
B $y = 6 \cdot 2^x$



3.

A $y = 5 \cdot 4^x$

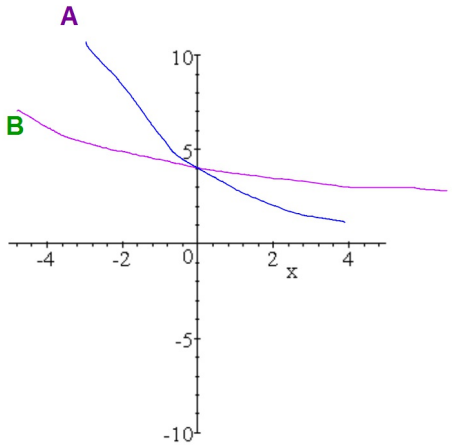
B $y = 5 \cdot \left(\frac{1}{2}\right)^x$



4.

A $y = 4 \cdot (0.25)^x$

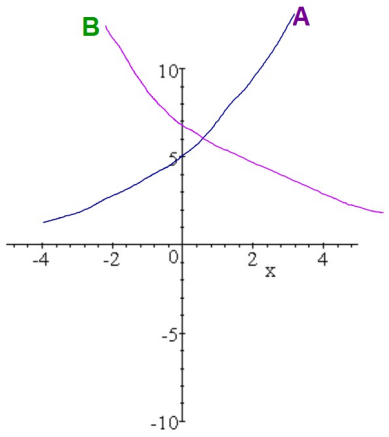
B $y = 4 \cdot (0.8)^x$



5.

A $y = 5 \cdot 3^x$

B $y = 7 \cdot (0.3)^x$



Simplify each. Make sure your answer doesn't have any exponents that are zero or negative and reduce all fractions, don't change them to decimals.

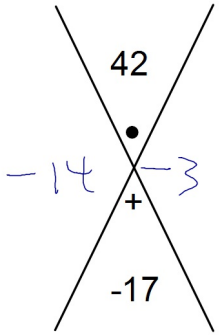
1. $\left(\frac{-8c^{-2}d^4}{a^5b^{-9}}\right)\left(6a^{-9}b^2c^{-7}d^{-2}\right)$ $= \frac{-48\,d^2\,b^{11}}{c^9\,a^{14}}$

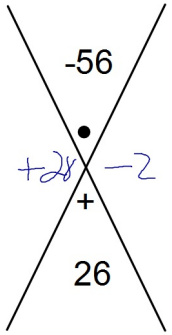
$\frac{-8\,d^4}{a^5c^2} \cdot \frac{6\,b^2}{a^9c^7\,d^2}$

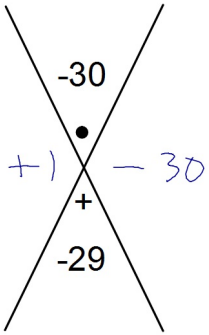
2. $\frac{2^{-3}w^{10}x^6y^{-2}z^3}{5w^6x^{-8}y^{-7}z^5}$

3. $\left(\frac{P^{-6}Q^4R^3}{4^{-1}Q^8R^{-2}}\right)^{-3}$

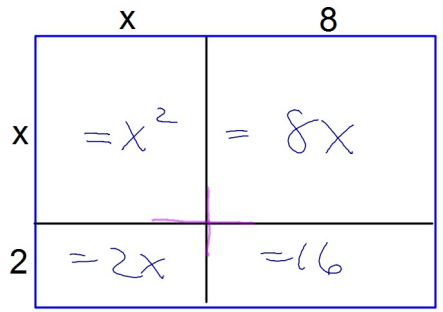
Find two numbers that multiply to what is on top and add to what is at the bottom.







Find the area of the blue rectangle.



$(x+2)(x+8)$

FOIL

$= x^2 + 10x + 16$

Expand this: $3x(2x - 11) = 6x^2 - 33x$

Expand this: $-5R^3(2R^6 + 12) = -10R^9 - 60R^3$