



Activity 32


Name: _____


A	B	C	D	E	F
-9	4	$3\frac{1}{2}$	$\frac{1}{4}$	-9	4
-4	$-\frac{1}{3}$	1	3	-4	$-\frac{1}{3}$
5	-1	-7	2	5	-1
$-2\sqrt{2}$	-3	2	-7	$-2\sqrt{2}$	-3
-9	4	$3\frac{1}{2}$	$\frac{1}{4}$	-9	4
-4	$-\frac{1}{3}$	1	3	-4	$-\frac{1}{3}$


Solve for x in each exercise.


 $3^{2x+1} = 3^{x+2}$
 $x = 1$

 $2^{x-2} = 2^{2x-1}$
 $x = -1$


 $5^{3x+2} = 5^{2x-5}$
 $x = -7$


 $10^{-2x-3} = 10^{4x-1}$
 $x = -\frac{1}{3}$


 $7^{2x+\sqrt{2}} = 7^{x-\sqrt{2}}$
 $x = -2\sqrt{2}$


 $2^{2x} \cdot 2^3 = 2^{x-1}$
 $x = -4$


Example: $27^x = 3^6$
 $(3^3)^x = 3^6$
 $3^{3x} = 3^6$
 $3x = 6$
 $x = 2$


 $16^{x+1} = 2^5$
 $x = \frac{1}{4}$


 $25^{x-1} = 5^{x+3}$
 $x = 5$


 $4^{x-1} = (\sqrt{2})^4$
 $x = 2$

 $49^{2x-2} = 7^{3x}$
 $x = 4$

 $81^{2x+3} = 3^{3x-3}$
 $x = -3$

 $10^{x+3} = 1000^{-2}$
 $x = -9$

 $(\frac{9}{16})^2 = (\frac{3}{4})^{x+1}$
 $x = 3$

 $(\frac{1}{100})^{x-2} = (\frac{1}{10})^3$
 $x = 3.5$