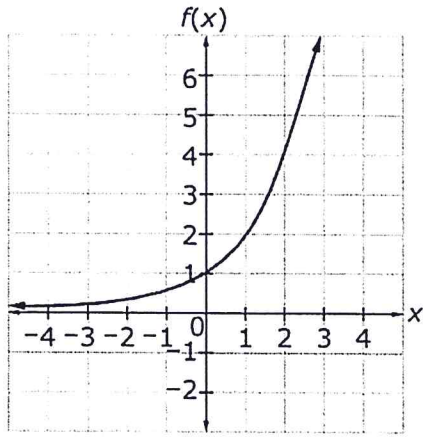
2. Determine whether each expression is equivalent to $(x^3 + 8)$. Select Yes or No for each expression.

	Yes	No
$(x + 8)^3$	☐	☐
$(x - 2)(x^2 + 2x + 4)$	☐	☐
$(x + 2)(x^2 - 2x + 4)$	☐	☐

AUG 2 BELLWORK
MON APRIL 20, 2015

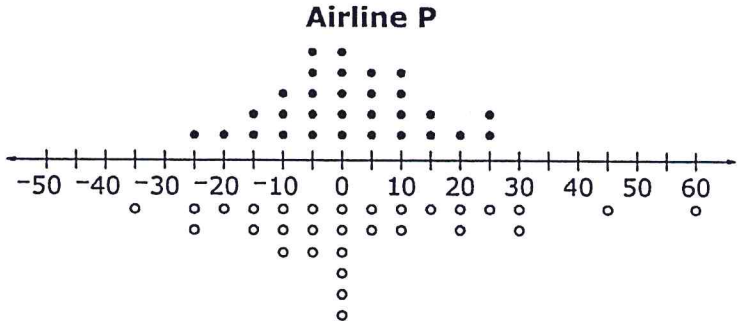
15. The graph of an exponential function f passes through (0, 1) and (2, 4), as shown.



Parent Exponential Equation: $y = a(b)^x$

What is the value of $f(6)$?

16. The dot plots below compare the number of minutes 30 flights made by two airlines arrived before or after their scheduled arrival times.



Negative numbers represent the minutes the flight arrived before its scheduled time.

Positive numbers represent the minutes the flight arrived after its scheduled time.

Zero indicates the flight arrived at its scheduled time.

Assuming you want to arrive as close to the scheduled time as possible, from which airline should you buy your ticket? Use the ideas of center and spread to justify your choice.

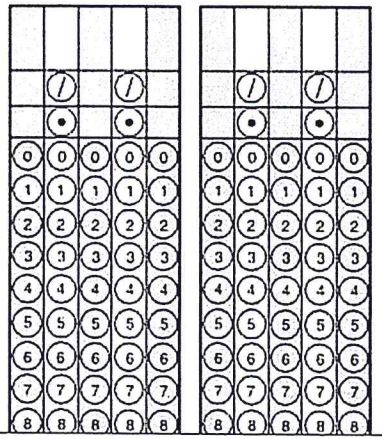
23. Determine values for c and d for which the equation

$$\sqrt{3x + 1} - \sqrt{cx + d} = 0$$

has no solution.

Enter a value for c in the first response box.

Enter a value for d in the second response box.



ANSWERS

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	Yes	No
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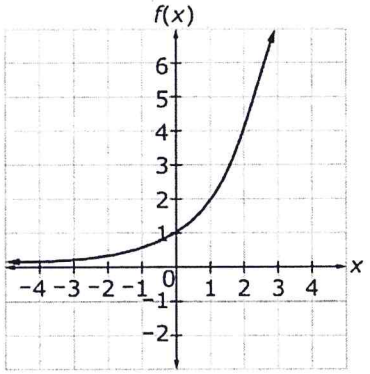


What is the value of $f(6)$?

$y = a \cdot b^x$

use (0,1)

$1 = a(0)^x$ } $y = 1^x$

$a = 1$

use (2,4) & $a = 1$

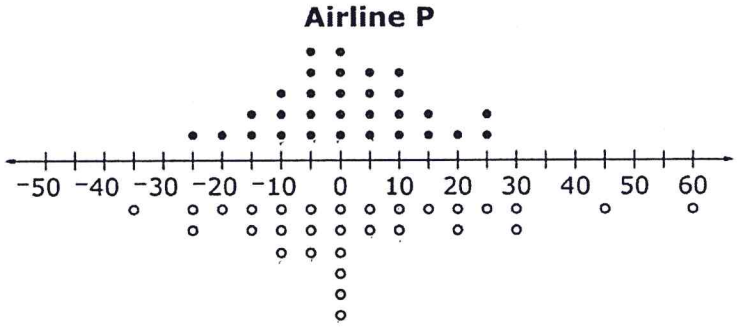
$4 = 1 \cdot (b)^2$

$4 = b^2$ $\quad b = 2$

$y = 1 \cdot 2^x$

$f(6) = 2^6 = 64$

16. The dot plots below compare the number of minutes 30 flights made by two airlines arrived before or after their scheduled arrival times.



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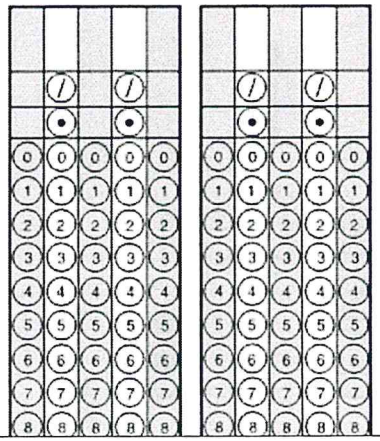

(#16) I would pick Airline P because:

(a) Airline Q has a much greater range of arrival times and has 5 flights that arrive earlier or later than any flight for Airline P

(b) $\frac{21}{30}$ = 70% of Airline P flights arrive within 10 min of scheduled time

where as only $16/30$ = 53% of Airline Q flights arrive within 10 min of scheduled time

(23)

$$\sqrt{3x+1} - \sqrt{cx+d} = 0$$

$$\sqrt{3x+1} = \sqrt{cx+d}$$

$$3x+1 = cx+d$$

for their to be no solution the variables must cancel ($\therefore c = 3$) and you must be left with a FALSE statement so d can be any # except 1