

ODD / EVEN FUNCTIONS

ODD Function. (Sine)

$$f(-x) = -f(x)$$

reflects about
y-axis

reflects about
x-axis

Ex $f(x) = x^3$

$$f(-x) = (-x)^3 = -x^3 = -f(x)$$

EVEN FUNCTIONS (Cos)

$$f(-x) = f(x)$$

Ex $f(x) = x^2$

$$f(-x) = (-x)^2 = x^2 = f(x)$$

$$y = A \sin(Bx + C) + D$$

What if $B < 0$?

$$y = 3 \sin(-2x + 4) - 7$$

Before I start \uparrow

$$y = 3 \sin[-2(x-2)] - 7$$

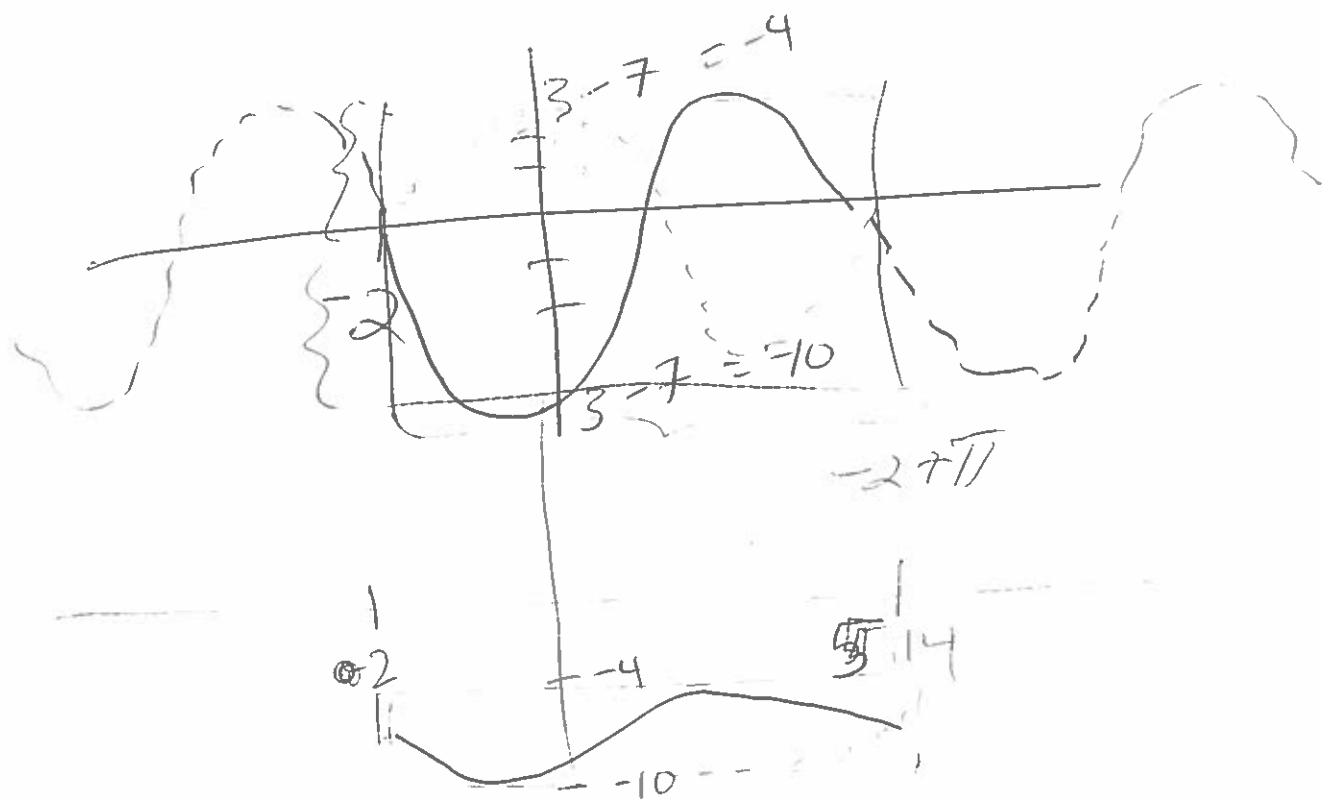
Is sine odd or even?

$$y = \textcircled{3} \sin(\underline{2x} \overline{-4}) - 7$$

1. Period? $= \frac{2\pi}{\underline{B}} = \frac{2\pi}{2} = \pi$

2. Phase Shift? $= -C/B = -4/2 = -2$

3. Amplitude, $|A| = 3$

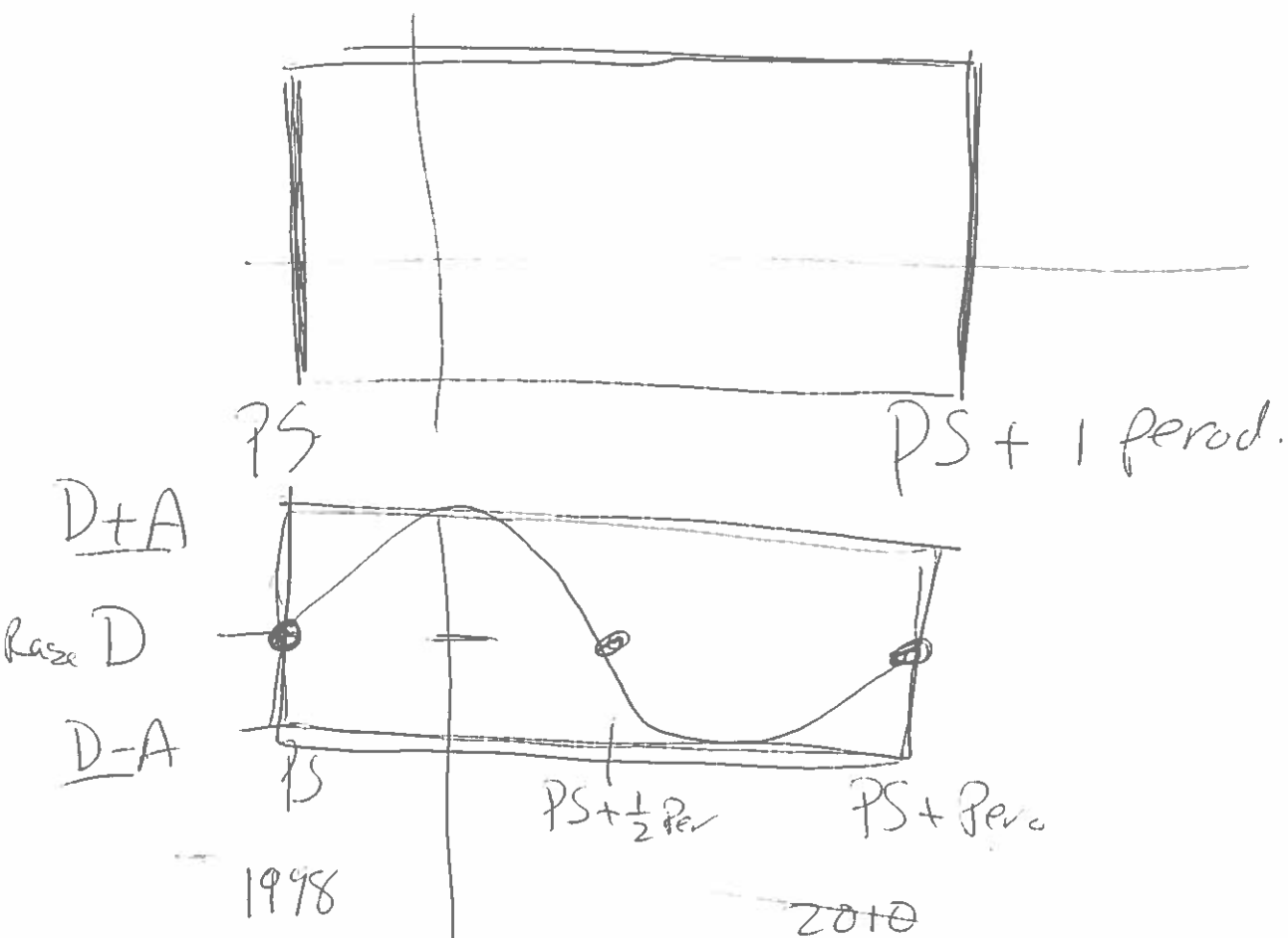


$$y = A \sin(Bx + C) + D$$

Period : $2\pi/B$

P.S : $-C/B$

Amp = $|A|$
 Raise low D



Lady Gaga has gone up to $D+A$ then to $D-A$ back D after 12 yrs.

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: <u>Stacy Karpinski</u>
Date: _____	Writer/Prep: <u>Scott Sliker</u>
Topics:	QC/Leader: <u>Danyan Zhou, Mengyi Guo</u> <u>Liyanghui Zhang</u>
Instructions:	

time	\$
8	300
9	2000
10	2300
11	4500
12	5670
13	5170
14	450
15	1250
16	2300
17	2000

$$y = A \sin (bx+c) + d$$

$$a = 2791.07$$

$$b = .88716$$

$$c = -2.54$$

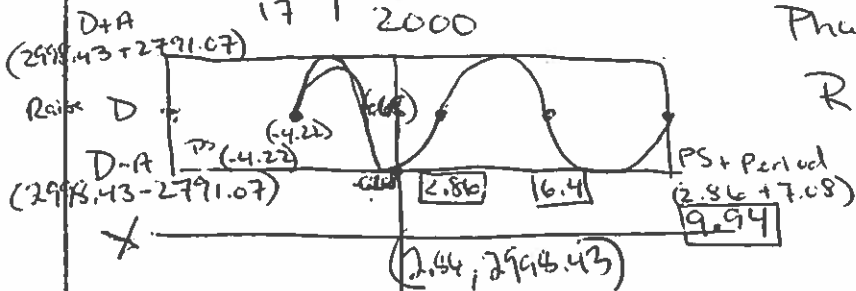
$$d = 2998.43$$

$$\text{amplitude} = 2791.07$$


$$\text{Period} = \frac{2\pi}{B} = 7.08$$

$$\text{Phase Shift} = \frac{-c}{B} = 2.86$$

$$\text{Raised} = D = 2998.43$$

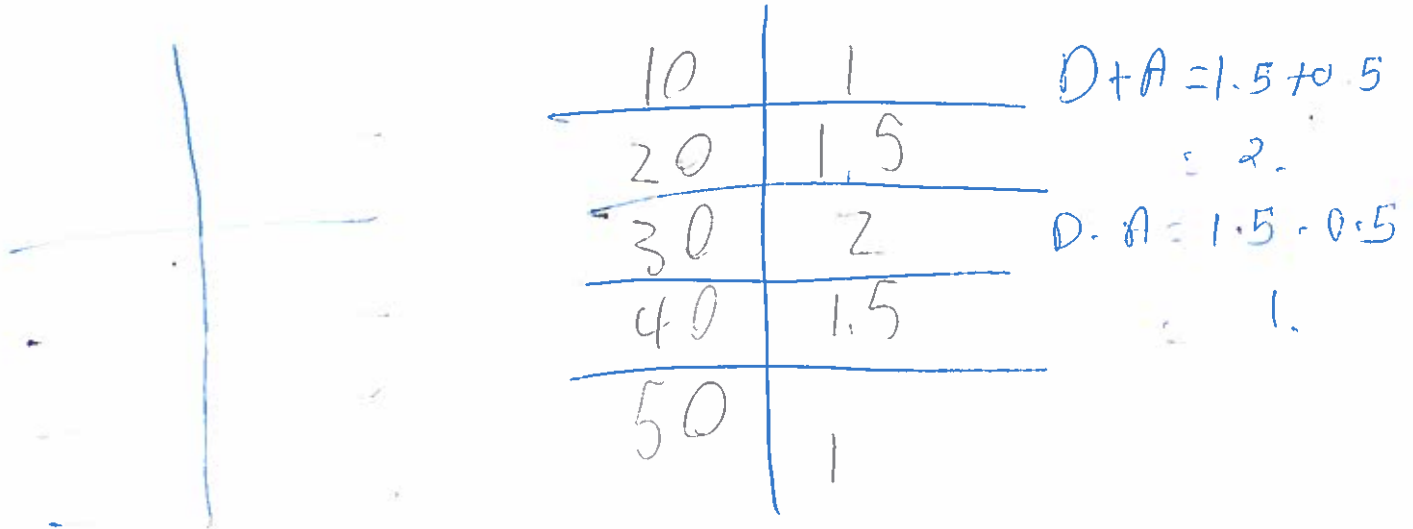


The volume of sales goes up to 5789.50 and down to 207.36 after 7 hours

GROUP NAME: <u>FLM</u>	Student Names (First and Last)
Logo: 	Speaker/Presenter: <u>Jake Peebles</u>
Date: <u>11/04/2013</u>	Writer/Prep: <u>Hissal Dencil</u>
Topics:	QC/Leader: <u>Kevin Velasquez</u>

Instructions:

$$y = A \sin(Bx + C) + D$$



$$y = 0.5 \sin(0.157x + 3.142) + 1.5$$

A = 0.5

B = 0.157

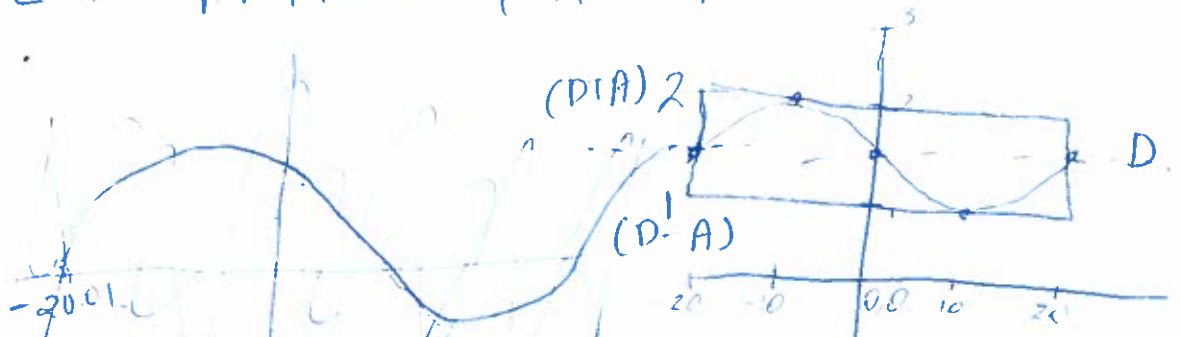
C = 3.142

D = 1.5

Period = $\frac{2\pi}{B} = \frac{2\pi}{0.157} = 40$

phase shift = $-\frac{C}{B} = -\frac{3.142}{0.157} = -20.01$

Amplitude = $|A| = |0.5| = 0.5$



In every 40 mins after 30 min you will be 2 miles away from the sight.

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: <u>INTENSIVE</u>
Date: <u>11/04/2013</u>	Writer/Prep: <u>LAUREN DORR</u>
Topics:	QC/Leader: <u>DOMINIQUE BASTA</u>

Instructions:

Year	Population
10	300
15	400
20	500
25	400
30	300

YEAR POPULATION

S: Reg

$$y = a * \sin(bx + c) + d$$

$a = 100$

$b = 0.3141592654$

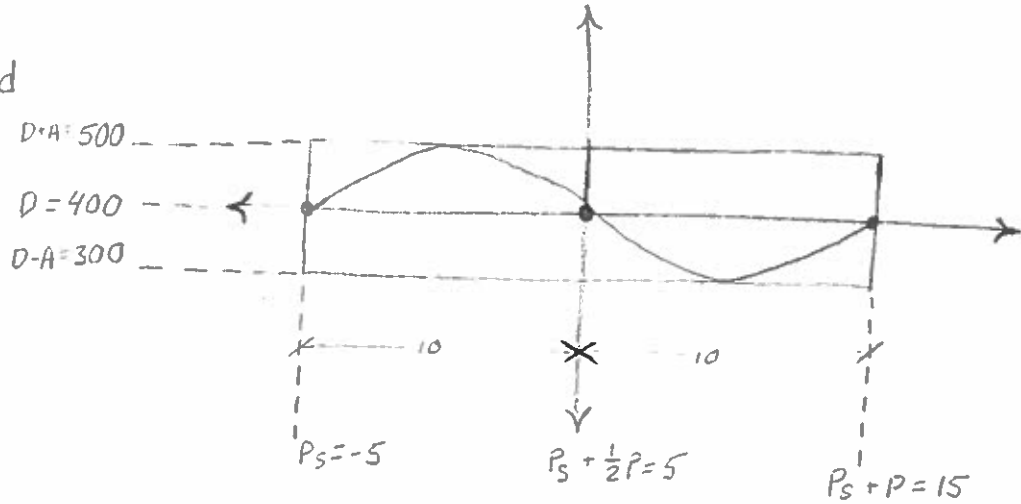
$c = 1.570796327$

$d = 400$

$P = \frac{2\pi}{0.314...} = 20$

$A = 100$

$P_s = \frac{-1.57}{0.314} = -5...$



THE POPULATION HAS GONE UP TO $D + A$, DOWN FROM $D + A$ TO $D - A$, AND UP FROM $D - A$ BACK TO D IN 20 YEARS.

GROUP NAME: Logo: Date: _____ Topics:	Student Names (First and Last) Speaker/Presenter: <u>Harrison Sunden</u> Writer/Prep: <u>Vinnie Avhad</u> QC/Leader: <u>part 1/2</u>
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Instructions:

Year	
1967	187
1970	1321
1980	53
1990	35
2000	124
2010	201

A: 932.31 ~~Er~~ E D's Planted
 Period (1 year)
 B = .117
 C: 1.09 Year - 9.3 to 214.3 AD
 Birds went there
 D: 114.79 life cycle

Period $\frac{2\pi}{B} = \frac{2(\pi)}{.117} = 53.7$

Phase shift = $\frac{-C}{B} = \frac{-1.09}{.117} = -9.316$

Amplitude = $|A| = 932.31$

$D+A = 932 + 114.79$

$D-A = \frac{932 - 114.79}{-9.3}$

44.4

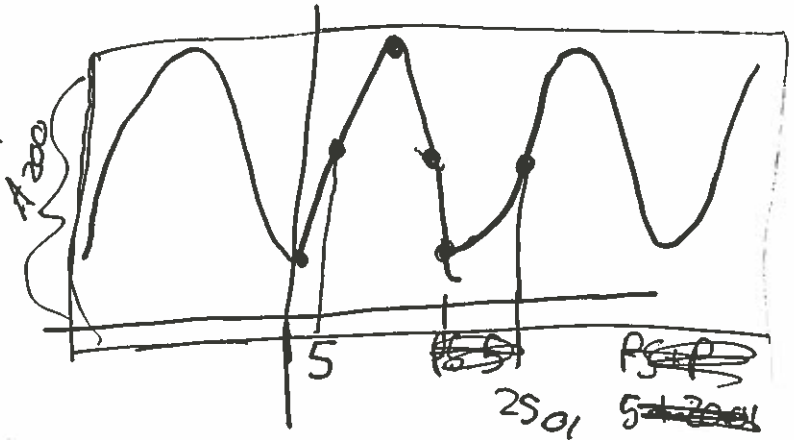
$p = 1 + \frac{1}{2} \text{ period} = -9.3 + \frac{1}{2}(53.7)$
 $= 17.55$

<p>GROUP NAME: <u>Falling Calcs</u></p> <p>Logo: <u>(X)</u></p>	<p>Student Names (First and Last)</p> <p>Speaker/Presenter: <u>Simon Gurm AW</u></p>
<p>Date: _____</p> <p>Topics: _____</p>	<p>Writer/Prep: <u>Brandon Rivera</u></p> <p>QC/Leader: <u>Onur Turkcan</u></p>

Instructions:

hours	Lava Lv.
0	200
5	400
10	600
15	400
20	200

$a = 200$
 $b = .314$
 $C = -1.57$
 $d = 400$
 $P = 20.01$
 $PS = 5$
 $A = 200$



Lava level goes through one cycle between hour 5 $\frac{1}{3}$ hour 25.

<p>GROUP NAME: _____</p> <p>Logo: _____</p>	<p>Student Names (First and Last) _____</p> <p>Speaker/Presenter: <u>Kaushal, Raj</u></p>
<p>Date: _____</p> <p>Topics: _____</p>	<p>Writer/Prep: <u>Valene</u></p> <p>QC/Leader: _____</p>

Instructions:

HS DATA SET LEVEL

5	5
10	20
20	35
30	20
40	5

$y = a + bx + c$

$y = a + 3x + c$

$a = 15$

$b = -1.57$

$c = -1.57$

$c = -10$

can't see it

base $5 + 2 = -c/b$

second $2/b$

$a = 15$

$\frac{-1.57}{-1.57} = 0$

$\frac{1.57}{-1.57} = -10$

$L + A = 35$
$M + A = 20$
$S + A = 5$

$25 - 10$

$15 + 10$

GROUP NAME: <u>W3</u>	Student Names (First and Last)
Logo:	Speaker/Presenter: <u>Amelia</u>
Date: _____	Writer/Prep: _____
Topics: <u>1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.</u>	QC/Leader: _____

Instructions: For each problem, write a short paragraph explaining your solution.

1/2 Werewolves

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