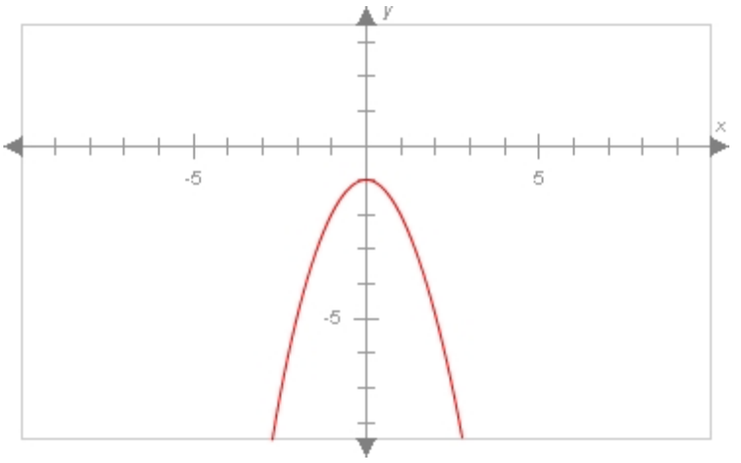
PREVIEW CLOSE

Quiz: Factoring by Graphing (Advanced)

Question 1a of 11 (2 What it means for a polynomial to have one root or no roots 90888)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: The graph below has:



	Choice	Feedback
*A.	no linear factors.	
B.	one repeated linear factor.	
C.	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: no linear factors.

Question 1b of 11 (2 What it means for a polynomial to have one root or no roots 294725)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: The graph below has:

	Choice	Feedback
*A.	no linear factors.	
B.	one repeated linear factor.	
C.	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: no linear factors.

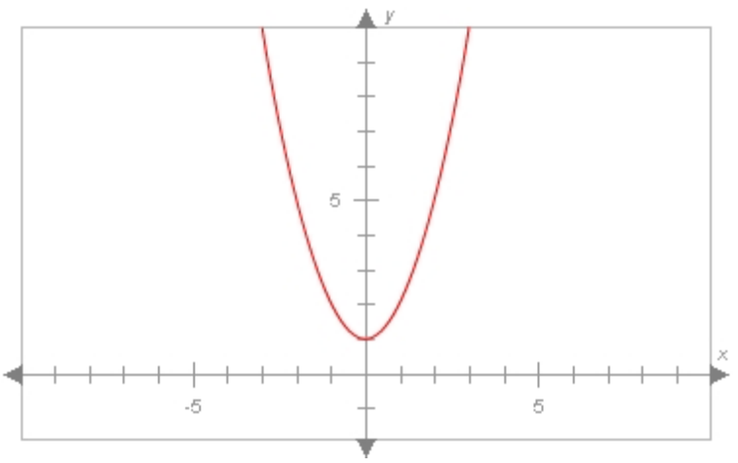
Question 1c of 11 (2 What it means for a polynomial to have one root or no roots 294726)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: The graph below has:

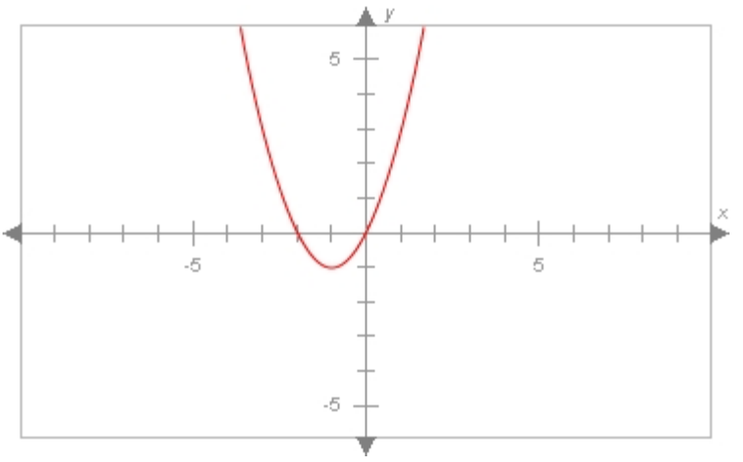


	Choice	Feedback
*A.	no linear factors.	
B.	one repeated linear factor.	
C.	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: no linear factors.

Question 2a of 11 (2 Identifying the roots of a polynomial and their importance 90889)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: The graph below has:

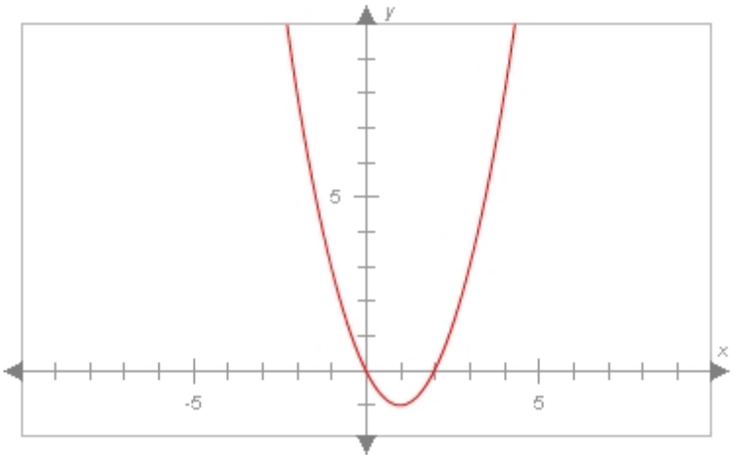


	Choice	Feedback
A.	no linear factors.	
B.	one repeated linear factor.	
***C.**	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: two dissimilar linear factors.

Question 2b of 11 (2 Identifying the roots of a polynomial and their importance 294727)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: The graph below has:

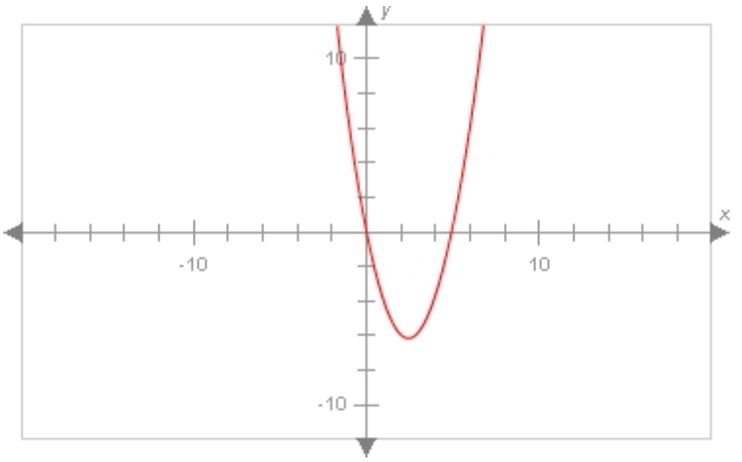


	Choice	Feedback
A.	no linear factors.	
B.	one repeated linear factor.	
***C.**	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: two dissimilar linear factors.

Question 2c of 11 (2 Identifying the roots of a polynomial and their importance 294728)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: The graph below has:

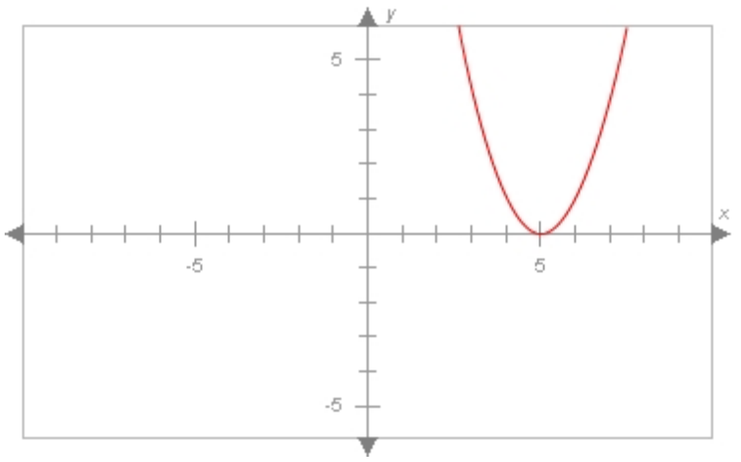


	Choice	Feedback
A.	no linear factors.	
B.	one repeated linear factor.	
***C.**	two dissimilar linear factors.	

Global Incorrect Feedback
The correct answer is: two dissimilar linear factors.

Question 3a of 11 (3 What it means for a polynomial to have one root or no roots 90890)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 2
Is Case Sensitive: false
Correct Answer: (x-5)^2, (x-5)(x-5), (1x-5)^2, (1x-5)(1x-5), (x^1-5)^2, (x^1-5)(x^1-5), (1x^1-5)^2, (1x^1-5)(1x^1-5), (x-5)*(x-5), (1x-5)*(1x-5), (x^1-5)*(x^1-5), (1x^1-5)*(1x^1-5)
Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*



y =

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 5)^2$.

Question 3b of 11 (3 What it means for a polynomial to have one root or no roots 294729)

Maximum Attempts: 1

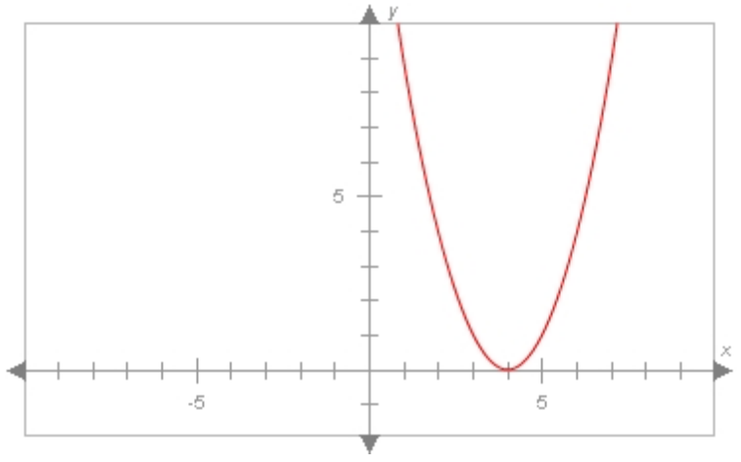
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x-4)^2, (x-4)(x-4), (1x-4)^2, (1x-4)(1x-4), (x^1-4)^2, (x^1-4)(x^1-4), (1x^1-4)^2, (1x^1-4)(1x^1-4), (x-4)*(x-4), (1x-4)*(1x-4), (x^1-4)*(x^1-4), (1x^1-4)*(1x^1-4)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*



y =

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 4)^2$.

Question 3c of 11 (3 What it means for a polynomial to have one root or no roots 294730)

Maximum Attempts: 1

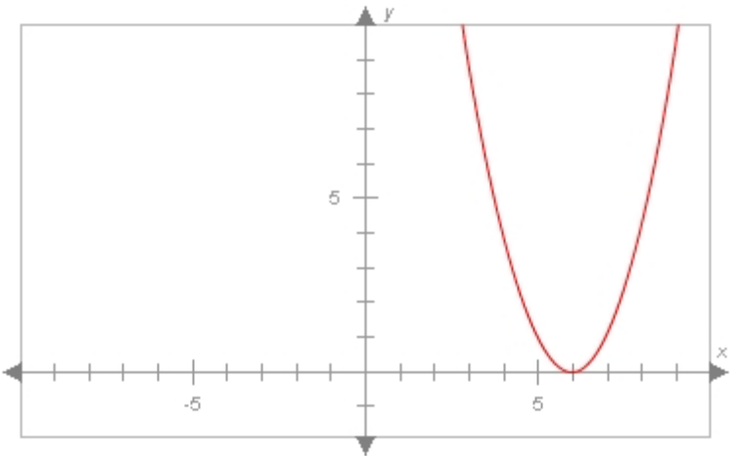
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x-6)^2, (x-6)(x-6), (1x-6)^2, (1x-6)(1x-6), (x^1-6)^2, (x^1-6)(x^1-6), (1x^1-6)^2, (1x^1-6)(1x^1-6), (x-6)*(x-6), (1x-6)*(1x-6), (x^1-6)*(x^1-6), (1x^1-6)*(1x^1-6)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*



$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 6)^2$.

Question 4a of 11 (3 What it means for a polynomial to have one root or no roots 90891)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x-2)^2, (x-2)(x-2), (1x-2)^2, (1x-2)(1x-2), (x^1-2)^2, (x^1-2)(x^1-2), (1x^1-2)^2, (1x^1-2)(1x^1-2), (x-2)*(x-2), (1x-2)*(1x-2), (x^1-2)*(x^1-2), (1x^1-2)*(1x^1-2)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*

$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 2)^2$.

Question 4b of 11 (3 What it means for a polynomial to have one root or no roots 294731)

Maximum Attempts: 1

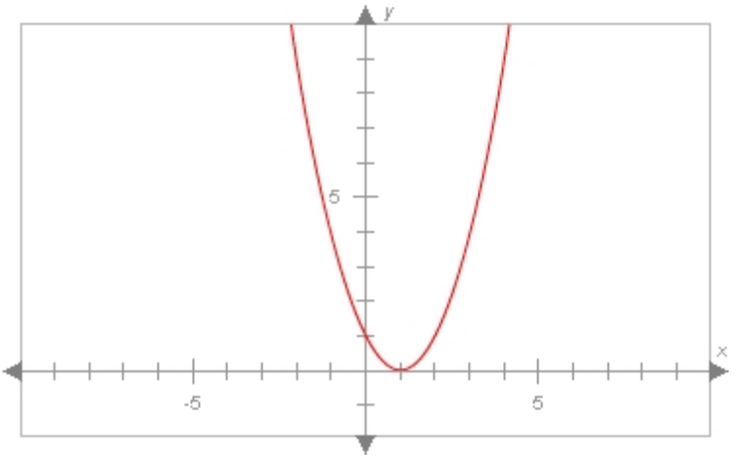
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x-1)^2, (x-1)(x-1), (1x-1)^2, (1x-1)(1x-1), (x^1-1)^2, (x^1-1)(x^1-1), (1x^1-1)^2, (1x^1-1)(1x^1-1), (x-1)*(x-1), (1x-1)*(1x-1), (x^1-1)*(x^1-1), (1x^1-1)*(1x^1-1)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*



$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 1)^2$.

Question 4c of 11 (3 What it means for a polynomial to have one root or no roots 294732)

Maximum Attempts: 1

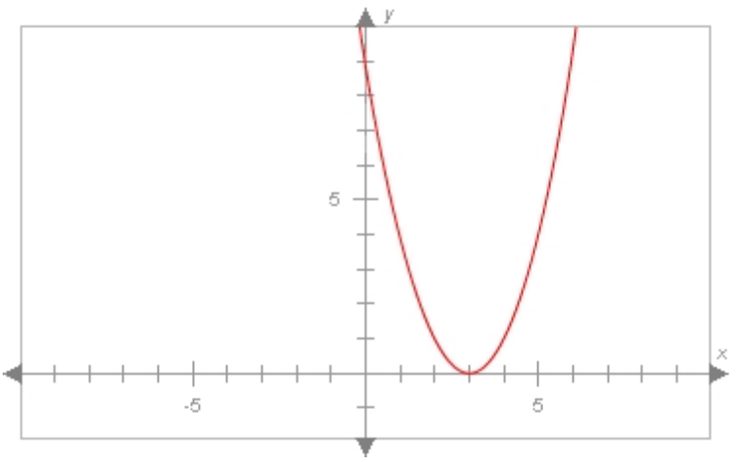
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x-3)^2, (x-3)(x-3), (1x-3)^2, (1x-3)(1x-3), (x^1-3)^2, (x^1-3)(x^1-3), (1x^1-3)^2, (1x^1-3)(1x^1-3), (x-3)*(x-3), (1x-3)*(1x-3), (x^1-3)*(x^1-3), (1x^1-3)*(1x^1-3)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.*



$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 3)^2$.

Question 5a of 11 (3 What it means for a polynomial to have one root or no roots 90892)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+5)^2, (x+5)(x+5), (1x+5)^2, (1x+5)(1x+5), (x^1+5)^2, (x^1+5)(x^1+5), (1x^1+5)^2, (1x^1+5)(1x^1+5), (x+5)*(x+5), (1x+5)*(1x+5), (x^1+5)*(x^1+5), (1x^1+5)*(1x^1+5)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.

$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 5)^2$.

Question 5b of 11 (3 What it means for a polynomial to have one root or no roots 294810)

Maximum Attempts: 1

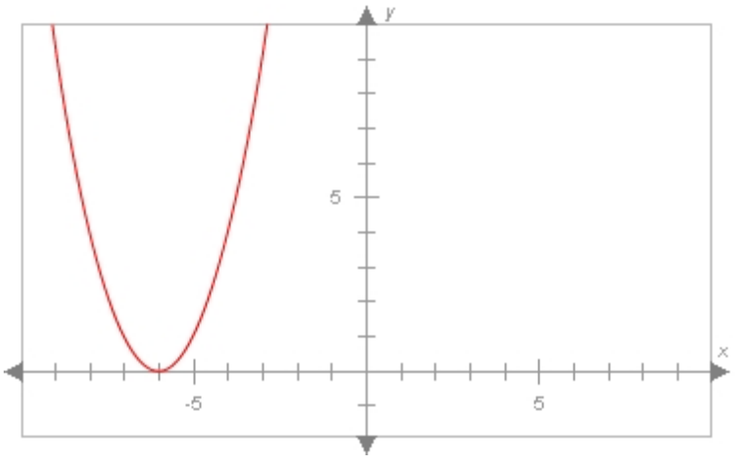
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+6)^2, (x+6)(x+6), (1x+6)^2, (1x+6)(1x+6), (x^1+6)^2, (x^1+6)(x^1+6), (1x^1+6)^2, (1x^1+6)(1x^1+6), (x+6)*(x+6), (1x+6)*(1x+6), (x^1+6)*(x^1+6), (1x^1+6)*(1x^1+6)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.



$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 6)^2$.

Question 5c of 11 (3 What it means for a polynomial to have one root or no roots 294811)

Maximum Attempts: 1

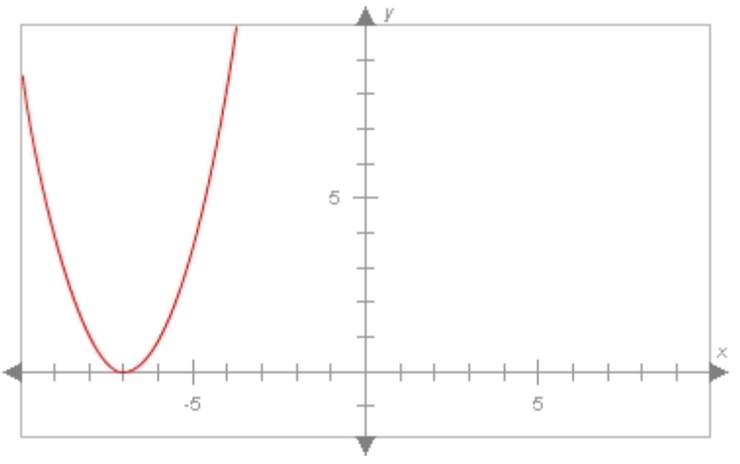
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+7)^2, (x+7)(x+7), (1x+7)^2, (1x+7)(1x+7), (x^1+7)^2, (x^1+7)(x^1+7), (1x^1+7)^2, (1x^1+7)(1x^1+7), (x+7)*(x+7), (1x+7)*(1x+7), (x^1+7)*(x^1+7), (1x^1+7)*(1x^1+7)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.



$y =$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 7)^2$.

Question 6a of 11 (3 What it means for a polynomial to have one root or no roots 90893)

Maximum Attempts: 1

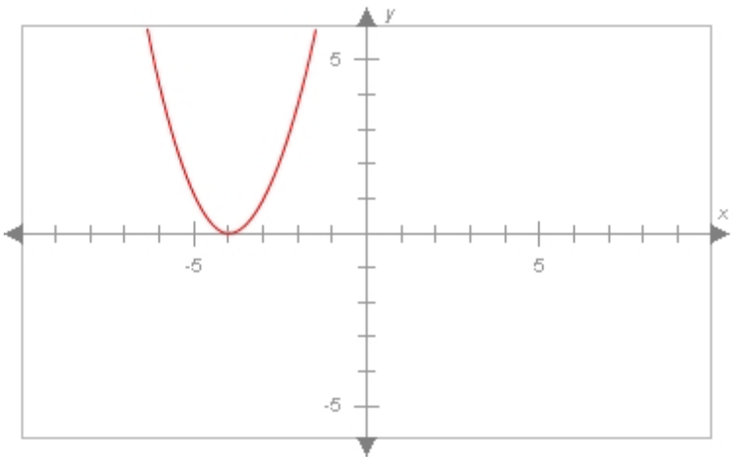
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+4)^2, (x+4)(x+4), (1x+4)^2, (1x+4)(1x+4), (x^1+4)^2, (x^1+4)(x^1+4), (1x^1+4)^2, (1x^1+4)(1x^1+4), (x+4)*(x+4), (1x+4)*(1x+4), (x^1+4)*(x^1+4), (1x^1+4)*(1x^1+4)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.



y =

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 4)^2$.

Question 6b of 11 (3 What it means for a polynomial to have one root or no roots 294812)

Maximum Attempts: 1

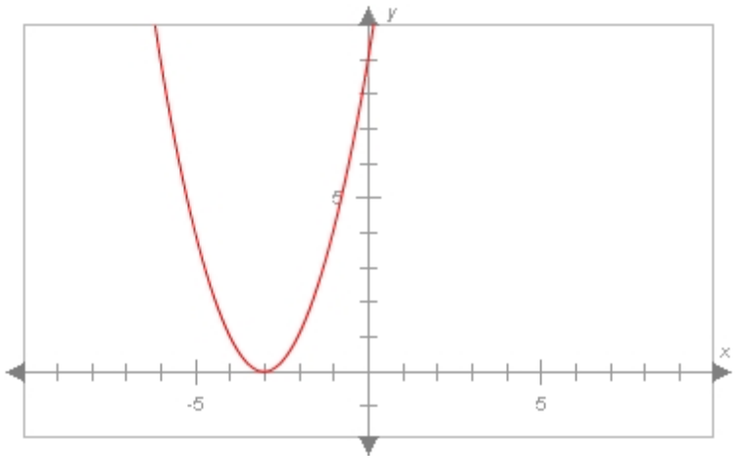
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+3)^2, (x+3)(x+3), (1x+3)^2, (1x+3)(1x+3), (x^1+3)^2, (x^1+3)(x^1+3), (1x^1+3)^2, (1x^1+3)(1x^1+3), (x+3)*(x+3), (1x+3)*(1x+3), (x^1+3)*(x^1+3), (1x^1+3)*(1x^1+3)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.



y =

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 3)^2$.

Question 6c of 11 (3 What it means for a polynomial to have one root or no roots 294813)

Maximum Attempts: 1

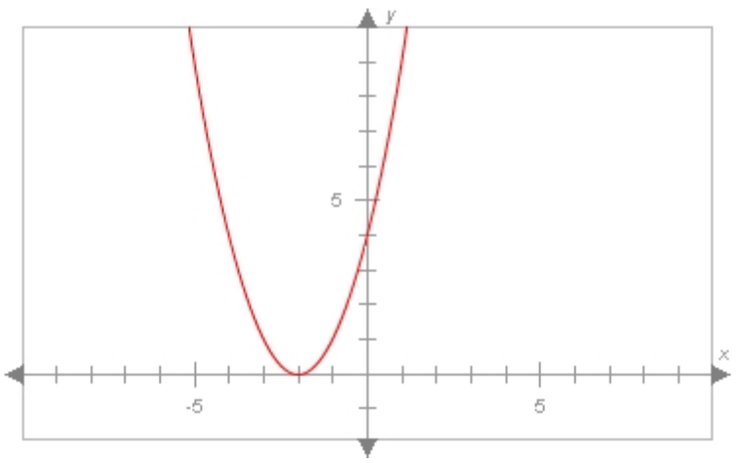
Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: (x+2)^2, (x+2)(x+2), (1x+2)^2, (1x+2)(1x+2), (x^1+2)^2, (x^1+2)(x^1+2), (1x^1+2)^2, (1x^1+2)(1x^1+2), (x+2)*(x+2), (1x+2)*(1x+2), (x^1+2)*(x^1+2), (1x^1+2)*(1x^1+2)

Question: What is the factorization of the polynomial graphed below? Assume it has no constant factor. *Write each factor as a polynomial in descending order.* Enter exponents using the caret (^). For example, you would enter $4x^2$ as 4x^2.



y =

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x + 2)^2$.

Question 7a of 11 (3 What it means for a polynomial to have one root or no roots 120535)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 2

Is Case Sensitive: false

Correct Answer: real

Question: Graphs that do *not* cross or meet the *x*-axis do not have real roots. In other words, they don't have factors of the form of $ax + b$, where *a* and *b* are _____ numbers.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: real.

Question 7b of 11 (3 What it means for a polynomial to have one root or no roots 294815)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 2
Is Case Sensitive: false
Correct Answer: real
Question: Graphs that do *not* cross or meet the *x*-axis do not have real roots. In other words, they don't have factors of the form of $ax + b$, where *a* and *b* are _____ numbers.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: real.

Question 7c of 11 (3 What it means for a polynomial to have one root or no roots 294816)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 2
Is Case Sensitive: false
Correct Answer: real
Question: Graphs that do *not* cross or meet the *x*-axis do not have real roots. In other words, they don't have factors of the form of $ax + b$, where *a* and *b* are _____ numbers.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: real.

Question 8a of 11 (2 What it means for a polynomial to have one root or no roots 120537)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which of the following equations does *not* have real roots?

	Choice	Feedback
A.	$x^2 + x - 2$	
B.	$12x^2 - 17x - 7$	
***C.**	$x^4 + 5x^2 + 6$	
D.	$2x^4 + 13x^3 + 21x^2$	

Global Incorrect Feedback
The correct answer is: $x^4 + 5x^2 + 6$.

Question 8b of 11 (2 What it means for a polynomial to have one root or no roots 294817)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which of the following equations does *not* have real roots?

	Choice	Feedback
A.	$x^2 + 4x - 4$	
***B.**	$x^2 + x + 7$	
C.	$-x^4 + 5x^2 + 6$	
D.	$2x^4 + 13x^3 + 21x^2$	

Global Incorrect Feedback
The correct answer is: $x^2 + x + 7$.

Question 8c of 11 (2 What it means for a polynomial to have one root or no roots 294818)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: Which of the following equations does *not* have real roots?

	Choice	Feedback
***A.**	$x^4 + 2x^2 + 2$	
B.	$x^2 - 17x - 7$	
C.	$-x^4 + 4x^2 + 6$	
D.	$2x^2 - 13$	

Global Incorrect Feedback
The correct answer is: $x^4 + 2x^2 + 2$.

Question 9a of 11 (3 What it means for a polynomial to have one root or no roots 120539)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 1
Question: How many roots does $y = x^2 - 4x + 4$ have? It may help to graph the equation.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 1.

Question 9b of 11 (3 What it means for a polynomial to have one root or no roots 294819)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 1
Question: How many roots does $y = x^2 - 2x + 1$ have? It may help to graph the equation.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 1.

Question 9c of 11 (3 What it means for a polynomial to have one root or no roots 294820)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 2
Correct Answer: 1
Question: How many roots does $y = x^2 - 6x + 9$ have? It may help to graph the equation.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 1.

Question 10a of 11 (3 Explaining how different polynomials can have the same roots 331393)

Maximum Attempts: 1
Question Type: True-False
Maximum Score: 2
Question: The polynomial $y = x^2 - 4x + 4$ has a repeated factor.

	Choice	Feedback
***A.**	True	
B.	False	

Global Incorrect Feedback
The correct answer is: True.

Question 10b of 11 (3 Explaining how different polynomials can have the same roots 294838)

Maximum Attempts: 1
Question Type: True-False
Maximum Score: 2
Question: The polynomial $y = x^2 - 3x + 9$ has a repeated factor.

	Choice	Feedback
A.	True	
***B.**	False	

Global Incorrect Feedback
The correct answer is: False.

Question 10c of 11 (3 Explaining how different polynomials can have the same roots 294839)

Maximum Attempts: 1

Question Type: True-False

Maximum Score: 2

Question: The polynomial $y = x^2 - 8x + 16$ has a repeated factor.

	Choice	Feedback
***A.**	True	
B.	False	

Global Incorrect Feedback
The correct answer is: True.

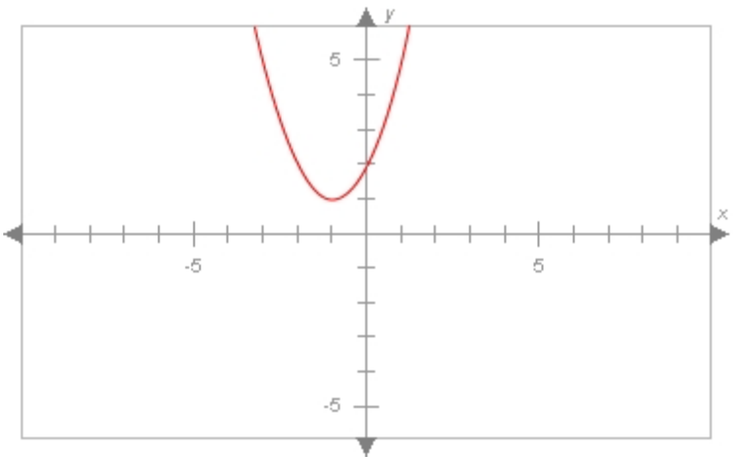
Question 11a of 11 (2 What it means for a polynomial to have one root or no roots 120541)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 2

Question: What are the factors of the polynomial graphed here?

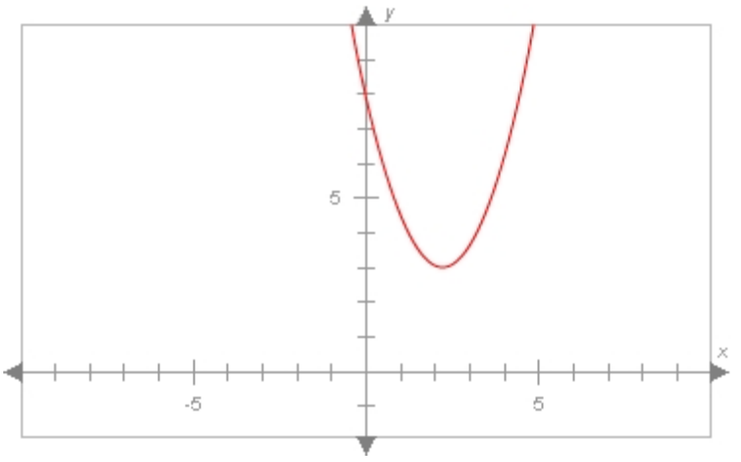


	Choice	Feedback
A.	$x = -5, x = 7$	
B.	$x = -2, x = 1.5$	
C.	$x = 2.2, x = 4.1$	
***D.**	It has no linear factors.	

Global Incorrect Feedback
The correct answer is: It has no linear factors.

Question 11b of 11 (2 What it means for a polynomial to have one root or no roots 294864)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: What are the factors of the polynomial graphed here?



	Choice	Feedback
A.	$x = -7, x = 5$	
B.	$x = -3, x = 1$	
C.	$x = 8.2, x = 4.1$	
***D.**	It has no linear factors.	

Global Incorrect Feedback
The correct answer is: It has no linear factors.

Question 11c of 11 (2 What it means for a polynomial to have one root or no roots 294865)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 2
Question: What are the factors of the polynomial graphed here?

	Choice	Feedback
A.	$x = -2, x = 10$	
B.	$x = -5, x = 1.5$	
C.	$x = 7.2, x = 4.1$	
***D.**	It has no linear factors.	

Global Incorrect Feedback
The correct answer is: It has no linear factors.