

Algebra 1 - Factoring Polynomials - Test

Common Core A-SSE.A.2, A-SSE.B.3a, A-APR.B.3 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This test checks factoring polynomials for Common Core A-SSE.A.2, A-SSE.B.3a, and A-APR.B.3. It has 9 questions worth 20 points in all, and you have 45 minutes. Write clear steps, because points are awarded for method as well as for the final answer. Leave a few minutes to review.

About this test

- Grade: Algebra 1
- Chapter: Factoring Polynomials
- Standards: A-SSE.A.2, A-SSE.B.3a, A-APR.B.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Greatest common factor [2 pts]

Factor $24x^3 + 16x^2$.

Question 2 - Simple trinomial [2 pts]

	x	?
x	x^2	
?		24

Area model for question 2.

Factor $x^2 + 11x + 24$.

Question 3 - Mixed signs [2 pts]

Factor $x^2 - 4x - 32$.

Question 4 - Leading coefficient 3 [2 pts]

Factor $3x^2 + 7x - 6$.

Question 5 - Difference of squares [2 pts]

Factor $x^2 - 81$.

Question 6 - Perfect square trinomial [2 pts]

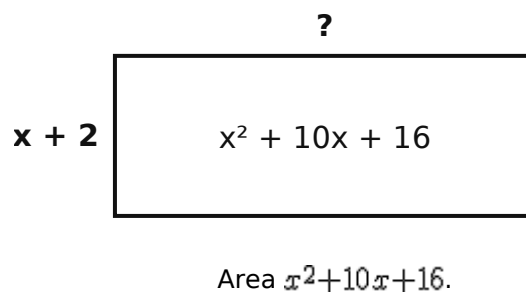
Factor $x^2 - 14x + 49$.

Question 7 - Factor completely and find zeros [3 pts]

Consider $3x^2 - 48$.

- Factor completely. (2 points)
- Find the values of x that make the expression 0. (1 point)

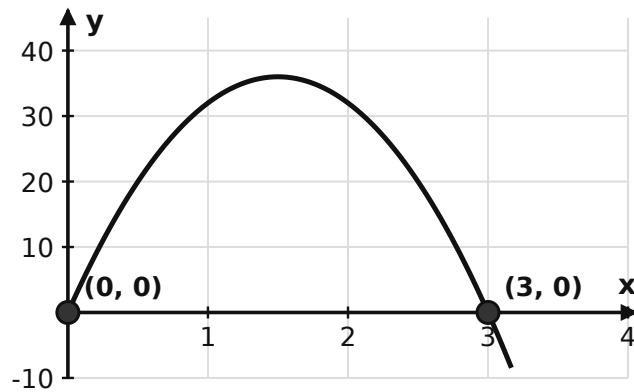
Question 8 - Rectangle dimensions [3 pts]



A rectangle has area $x^2 + 10x + 16$ square meters and width $x + 2$ meters.

- Factor the area. (2 points)
- Find the length. (1 point)

Question 9 - Ball landing time [2 pts]



Height of a ball in feet.

A ball's height in feet is $h(t) = -16t^2 + 48t$. Factor the expression and find when the ball lands.