BECA / Huson / 10.3 Geometry
7 December 2018

Name:

Regents Practice: Factoring & Solving Quadratics

Regents Exam Questions
A.SSE.B.3: Solving Quadratics
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1 Keith determines the zeros of the function $f(x)$ to be -6 and 5. What could be Keith's function?
1) $f(x) = (x+5)(x+6)$
2) $f(x) = (x+5)(x-6)$
3) $f(x) = (x-5)(x+6)$
4) $f(x) = (x-5)(x-6)$

2 What is the solution set of the equation $(x-2)(x-a) = 0$?
1) -2 and a
2) -2 and $-a$
3) 2 and a
4) 2 and $-a$

3 Which equation has the same solutions as $2x^2 + x - 3 = 0$
1) $(2x-1)(x+3) = 0$
2) $(2x+1)(x-3) = 0$
3) $(2x-3)(x+1) = 0$
4) $(2x+3)(x-1) = 0$

4 The zeros of the function $f(x) = 2x^2 - 4x - 6$ are
1) 3 and -1
2) 3 and 1
3) -3 and 1
4) -3 and -1

5 The zeros of the function $f(x) = 3x^2 - 3x - 6$ are
1) -1 and -2
2) 1 and -2
3) 1 and 2
4) -1 and 2

6. Which expression is a factor of $n^2 + 3n - 54$?
1) $n+6$
2) n^2+9
3) $n-9$
4) $n+9$

7. What are the factors of $x^2 - 10x - 24$?
1) $(x-4)(x+6)$
2) $(x-4)(x-6)$
3) $(x-12)(x+2)$
4) $(x+12)(x-2)$

8. What are the factors of $x^2 - 5x + 6$?
1) $(x+2)$ and $(x+3)$
2) $(x-2)$ and $(x-3)$
3) $(x+6)$ and $(x-1)$
4) $(x-6)$ and $(x+1)$

9. If $x+2$ is a factor of $x^2 + bx + 10$, what is the value of b?

10. In the equation $x^2 + 10x + 24 = (x+a)(x+b)$, b is an integer. Find algebraically *all* possible values of b.