

Math 3 Advanced

Unit 2 Quiz (practice test)

- What is the vertex of the following quadratic equation?
 $f(x) = (x + 3)^2 + 8$

a) $(-8, 3)$ b) $(3, 8)$ c) $(8, 3)$ d) $(-3, 8)$
- Rewrite the following equation into vertex form.
 $f(x) = x^2 - 8x + 21$

a) $f(x) = (x - 8)^2 - 43$ b) $f(x) = (x - 4)^2 + 5$
c) $f(x) = (x - 8)^2 + 85$ d) $f(x) = (x - 4)^2 + 37$
- Determine the range of the linear absolute value function below.
 $f(x) = 2|x + 4| + 6$

a) $[2, \infty)$ b) $(-\infty, 6]$
c) $(-\infty, 2]$ d) $[6, \infty)$
- How many solutions are there to the following linear absolute value equation?
 $|x + 7| - 3 = 6$

a) Zero b) One c) Two d) Infinite
- Determine the number of roots of the quadratic function below.
 $f(x) = -4(x + 2)^2 - 1$

a) Two b) One c) Zero d) Infinite
- Simplify the following imaginary number.
 i^{17}

a) 1 b) i c) $-i$ d) -1
- Simplify the following imaginary number.
 i^{60}

a) 1 b) i c) $-i$ d) -1
- Simplify the expression below:
 $(4 + 6i) - 2(5 - 7i)$

a) $-10 - i$ b) $-10 + 20i$
c) $-6 - i$ d) $-6 + 20i$
- Simplify the expression below:
 $(2 - 3i)(2 + 3i)$

a) $-5 - 12i$ b) $13 + 12i$
c) 13 d) -5
- Simplify the expression below:
 $(3 + 4i)(7 + 2i)$

a) $13 + 34i$ b) $29 + 34i$
c) $29 + 10i$ d) $13 + 10i$