Unit 9 STAAR Review

	Question	TEKS	Exam/ Question#	Unit
1	Which expression is equivalent to $\sqrt{184}$? **A** 92 **B** $2\sqrt{46}$ [correct answer] **C** $4\sqrt{23}$ **D** $4\sqrt{46}$	A.11(A)	2021/ Question#1	9
2	What are the solutions to $2(x-7)^2=32$? **A** $x=7\pm\sqrt{32}$ **B** $x=\pm\sqrt{65}$ **C** $x=3$ and $x=11$ [correct answer] **D** $x=-1$ and $x=15$	A.8(A)	2016/ Question#29	9

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3	Which statement about the quadratic functions below is false? $f(x) = -\frac{3}{4}x^2 + 6$ $g(x) = -2x^2 - 5$ $h(x) = \frac{1}{4}x^2 + 1$ **A** The graphs of two of these functions have a minimum point. [correct answer] **B** The graphs of all these functions have the same axis of symmetry. **C** The graphs of two of these functions do not cross the x-axis. **D** The graphs of all these functions have different y-intercepts.	A.9(D)	2014/ Question#21	9
4	Which expression is equivalent to $4\sqrt{147}$? **A** $196\sqrt{3}$ **B** $12\sqrt{7}$ **C** $3\sqrt{7}$ **D** $28\sqrt{3}$ [correct answer]	A.11(A)	2019/ Question#53	9

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5	What are the solutions to the equation $x^2 - 4x = -1$? **A** $x = \frac{-4 \pm \sqrt{20}}{2}$ **B** $x = \frac{4 \pm \sqrt{12}}{2}$ [correct answer] **C** $x = \frac{-4 \pm \sqrt{12}}{2}$ **D** $x = \frac{4 \pm \sqrt{20}}{2}$	A.10(A)	2014/ Question#24	9
6	Which value of x is a solution to this equation? $5x^2 - 36x + 36 = 0$ **A** $x = -6$ **B** $x = 4$ **C** $x = -1.8$ **D** $x = 1.2$ [correct answer]	A.8(A)	2019/ Question#40	8
7	Which function is equivalent to $y = 3(x + 2)^2 + 7$? **A** $y = 3x^2 + 12x + 33$ **B** $y = 3x^2 + 12x + 19$ [correct answer] **C** $y = 3x^2 + 19$ **D** $y = 3x^2 + 33$	A.6(B)	2019/ Question#43	7

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8	Which function is equivalent to $q(x) = 9x^2 - 24x + 16$? **A** $q(x) = (9x - 4)(x - 4)$ **B** $q(x) = (3x + 4)^2$ **C** $q(x) = (9x + 4)(x + 4)$ **D** $q(x) = (3x - 4)^2$ [correct answer]	A.10(E)	2019/ Question#48	6
9	Scientists are studying a bacteria sample. The function $f(x) = 245(1.12)^x$ gives the number of bacteria in the sample at the end of x days. Which statement is the best interpretation of one of the values in this function? **A** The initial number of bacteria is 12. **B** The initial number of bacteria decreases at a rate of 88% each day. **C** The number of bacteria increases at a rate of 12% each day. [correct answer] **D** The number of bacteria at the end of one day is 245.	A.9(B)	2018/ Question#46	5

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10	The table shows the amount of pet food in cups remaining in an automatic feeder as a function of the number of meals the feeder has dispensed. **Number of Meals Dispensed, n** / **Amount of Pet Food Remaining $f(n)$ (cups)** 1 — 21 3 — 15 6 — 6 7 — 3 Based on the table, which function models this situation? **A** $f(n) = -3n + 24$ [correct answer] **B** $f(n) = -\frac{1}{3}n + 16$ **C** $f(n) = -3n + 64$ **D** $f(n) = -\frac{1}{3}n + 8$	A.2(C)	2019/ Question#32	4