9 Which function represents the graph of $w(x) = |x|$ shifted 2 units to the right?

(1) $g(x) = |x + 2|$

(2) $h(x) = |x - 2|$

(3) $q(x) = |x| + 2$

(4) $r(x) = |x| - 2$

4 Given the following expressions:

I. $-\frac{5}{8}+\frac{3}{5}$

II. $\frac{1}{2}+\sqrt{2}$

III. $\left(\sqrt{5}\right)\cdot\left(\sqrt{5}\right)$

IV. $3\cdot\left(\sqrt{49}\right)$

Which expression(s) result in an irrational number?

(1) II, only

(2) III, only

(3) I, III, IV

(4) II, III, IV

17 If $x = 4a^2 - a + 3$ and $y = a - 5$, then which polynomial is equivalent to the product of x and y?

(1) $-17a^2 - 2a - 15$

(2) $-17a^2 + 8a - 15$

(3) $4a^3 - 21a^2 - 2a - 15$

(4) $4a^3 - 21a^2 + 8a - 15$

15 What is the sum of $8\sqrt{3}$ and $\sqrt{3}$?

(1) $8\sqrt{6}$

(2) $9\sqrt{6}$

(3) $7\sqrt{3}$

(4) $9\sqrt{3}$

11 Nancy has just been hired for her first job. Her company gives her four choices for how she can collect her annual salary over the first eight years of employment.

Each function below represents the four choices she has for her annual salary in thousands of dollars, where t represents the number of years after she is hired.

$$a(t) = 2^t + 25$$
$$b(t) = 10t + 75$$
$$c(t) = \sqrt{400t} + 80$$
$$d(t) = 2(t + 1)^2 - 10t + 50$$

Which pay plan should Nancy choose in order to have the highest salary in her eighth year?

(1) $a(t)$

(2) $b(t)$

(3) $c(t)$

(4) $d(t)$

Answer Key:

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