

Use this space for computations.

7 Which expression results in a rational number?

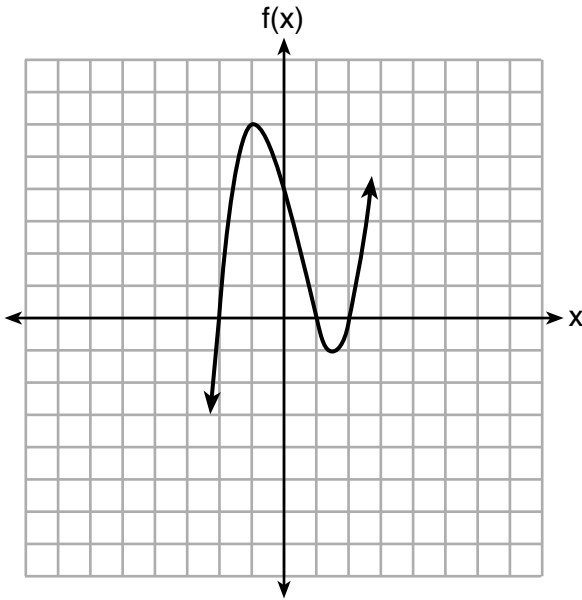
(1) $\sqrt{2} \cdot \sqrt{18}$

(3) $\sqrt{2} + \sqrt{2}$

(2) $5 \cdot \sqrt{5}$

(4) $3\sqrt{2} + 2\sqrt{3}$

8 A polynomial function is graphed below.



Which function could represent this graph?

(1) $f(x) = (x + 1)(x^2 + 2)$

(3) $f(x) = (x - 1)(x^2 - 4)$

(2) $f(x) = (x - 1)(x^2 - 2)$

(4) $f(x) = (x + 1)(x^2 + 4)$

9 When solving $p^2 + 5 = 8p - 7$, Kate wrote $p^2 + 12 = 8p$. The property she used is

(1) the associative property

(2) the commutative property

(3) the distributive property

(4) the addition property of equality

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10 David wanted to go on an amusement park ride. A sign posted at the entrance read “You must be greater than 42 inches tall and no more than 57 inches tall for this ride.” Which inequality would model the height, x , required for this amusement park ride?

- (1) $42 < x \leq 57$ (3) $42 < x$ or $x \leq 57$
(2) $42 > x \geq 57$ (4) $42 > x$ or $x \geq 57$

11 Which situation can be modeled by a linear function?

- (1) The population of bacteria triples every day.
(2) The value of a cell phone depreciates at a rate of 3.5% each year.
(3) An amusement park allows 50 people to enter every 30 minutes.
(4) A baseball tournament eliminates half of the teams after each round.

12 Jenna took a survey of her senior class to see whether they preferred pizza or burgers. The results are summarized in the table below.

	Pizza	Burgers
Male	23	42
Female	31	26

Of the people who preferred burgers, approximately what percentage were female?

- (1) 21.3 (3) 45.6
(2) 38.2 (4) 61.9

13 When $3a + 7b > 2a - 8b$ is solved for a , the result is

- (1) $a > -b$ (3) $a < -15b$
(2) $a < -b$ (4) $a > -15b$