

A.A.1: Translate a quantitative verbal phrase into an algebraic expression.

1. 010604a, P.I. A.A.1
Which expression represents "5 less than the product of 7 and x "?
[A] $7(x - 5)$ [B] $7 + x - 5$
[C] $5 - 7x$ [D] $7x - 5$
2. 010820a, P.I. A.A.1
If x represents a given number, the expression "5 less than twice the given number" is written as
[A] $5 < 2x$ [B] $2x - 5$
[C] $5 < 2 + x$ [D] $5 - 2x$
3. 080002a, P.I. A.A.1
A hockey team played n games, losing four of them and winning the rest. The ratio of games won to games lost is
[A] $\frac{n}{4}$ [B] $\frac{n-4}{4}$ [C] $\frac{4}{n-4}$ [D] $\frac{4}{n}$
4. 010427a, P.I. A.A.1
Which expression represents the number of yards in x feet?
[A] $3x$ [B] $12x$ [C] $\frac{x}{3}$ [D] $\frac{x}{12}$
5. 060014a, P.I. A.A.1
If rain is falling at the rate of 2 inches per hour, how many inches of rain will fall in x minutes?
[A] $2x$ [B] $\frac{60}{x}$ [C] $\frac{30}{x}$ [D] $\frac{x}{30}$
6. 060408a, P.I. A.A.1
Tara buys two items that cost d dollars each. She gives the cashier \$20. Which expression represents the change she should receive?
[A] $20 + 2d$ [B] $20 - 2d$
[C] $20 - d$ [D] $2d - 20$
7. 080509a, P.I. A.A.1
The sum of Scott's age and Greg's age is 33 years. If Greg's age is represented by g , Scott's age is represented by
[A] $33g$ [B] $g + 33$
[C] $g - 33$ [D] $33 - g$
8. 060904ia, P.I. A.A.1
Marie currently has a collection of 58 stamps. If she buys s stamps each week for w weeks, which expression represents the total number of stamps she will have?
[A] $58s + w$ [B] $58sw$
[C] $58 + sw$ [D] $58 + s + w$
9. 010903a, P.I. A.A.1
A ship sailed t miles on Tuesday and w miles on Wednesday. Which expression represents the average distance per day traveled by the ship?
[A] $\frac{t+w}{2}$ [B] $t - w$
[C] $2(t+w)$ [D] $t + \frac{w}{2}$
10. 060823ia, P.I. A.A.1
Mr. Turner bought x boxes of pencils. Each box holds 25 pencils. He left 3 boxes of pencils at home and took the rest to school. Which expression represents the total number of pencils he took to school?
[A] $22x$ [B] $25 - 3x$
[C] $25x - 3$ [D] $25x - 75$
11. 010824a, P.I. A.A.1
The larger of two consecutive integers is represented by $x + 4$. Which expression represents the *smaller* integer?
[A] $x + 2$ [B] $x + 3$
[C] $x + 6$ [D] $x + 5$

12. 010006a, P.I. A.A.1
If the number represented by $n-3$ is an odd integer, which expression represents the next greater odd integer?
[A] $n + 1$ [B] $n - 5$ [C] $n - 2$ [D] $n - 1$
13. 010506a, P.I. A.A.1
If $n + 4$ represents an odd integer, the next larger odd integer is represented by
[A] $n + 6$ [B] $n + 3$
[C] $n + 2$ [D] $n + 5$
14. 060806a, P.I. A.A.1
If $2n + 1$ represents an odd integer, the next larger odd integer is represented by
[A] $2n + 3$ [B] $2n$
[C] $2n - 1$ [D] $2n + 2$
15. 080716a, P.I. A.A.1
In the Ambrose family, the ages of the three children are three consecutive even integers. If the age of the youngest child is represented by $x + 3$, which expression represents the age of the oldest child?
[A] $x + 5$ [B] $x + 6$
[C] $x + 7$ [D] $x + 8$
16. 010712a, P.I. A.A.1
Which expression represents the product of two consecutive odd integers, where n is an odd integer?
[A] $n(n + 2)$ [B] $2n + 1$
[C] $n(n + 1)$ [D] $n(n + 3)$
17. 010224a, P.I. A.A.1
Ashanti and Maria went to the store to buy snacks for their back-to-school party. They bought bags of chips, pretzels, and nachos. They bought three times as many bags of pretzels as bags of chips, and two fewer bags of nachos than bags of pretzels. If x represents the number of bags of chips they bought, express, in terms of x , how many bags of snacks they bought in all.
18. 010924ia, P.I. A.A.1
The length of a rectangular room is 7 less than three times the width, w , of the room. Which expression represents the area of the room?
[A] $3w - 7$ [B] $3w^2 - 7w$
[C] $3w - 4$ [D] $3w^2 - 4w$
19. 080811a, P.I. A.A.1
The width, w , of a rectangular rug is 4 less than its length, ℓ . Which expression represents the area of the rug?
[A] $2w + 2\ell$ [B] $2(\ell - 4) + 2\ell$
[C] $\ell(\ell - 4)$ [D] $\ell(4 - \ell)$
20. spring9824a, P.I. A.A.1
Mr. Cash bought d dollars worth of stock. During the first year, the value of the stock tripled. The next year, the value of the stock decreased by \$1200.
(a) Write an expression in terms of d to represent the value of the stock after two years.
(b) If an initial investment is \$1,000, determine its value at the end of 2 years.
21. 060113b, P.I. A.A.1
A store advertises that during its Labor Day sale \$15 will be deducted from every purchase over \$100. In addition, after the deduction is taken, the store offers an early-bird discount of 20% to any person who makes a purchase before 10 a.m. If Hakeem makes a purchase of x dollars, $x > 100$, at 8 a.m., what, in terms of x , is the cost of Hakeem's purchase?
[A] $0.20x - 3$ [B] $0.85x - 20$
[C] $0.80x - 12$ [D] $0.20x - 15$

A.A.1: Translate a quantitative verbal phrase into an algebraic expression.

[1] D _____

[2] B _____

[3] B _____

[4] C _____

[5] D _____

[6] B _____

[7] D _____

[8] C _____

[9] A _____

[10] D _____

[11] B _____

[12] D _____

[13] A _____

[14] A _____

[15] C _____

[16] A _____

[2] $7x - 2$ or $x + 3x + 3x - 2$, and appropriate work is shown, such as $x + 3x + 3x - 2$ when chips = x , pretzels = $3x$, and nachos = $3x - 2$.

[1] The expressions for snacks are represented correctly, but one computational error is made in adding the expressions.

or [1] The expressions for snacks are represented incorrectly, but the expressions are added appropriately.

or [1] $7x - 2$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[17] incorrect procedure. _____

[18] B _____

[19] C _____

[2] a) $3d - 1200$ or an equivalent expression.
AND

b) \$1800.

[1] One of the correct answers listed above.
or [1] Calculating an answer for part (b) which is correct for an incorrect expression

[20] shown in part (a). _____

[21] C _____