

SOLVING EXPRESSIONS DRILL

13. If $3x - y = 17$ and $2x - 2y = 6$, what is the value of $x + y$?

- (A) 8
- (B) 9
- (C) 11
- (D) 12
- (E) 14

16. If $(x - y)^2 = 25$ and $xy = 10$, then what is $x^2 + y^2$?

16. If $a + b = -8$ and $a^2 + b^2 = 50$, what is ab ?

- (A) 14
- (B) 10
- (C) 9
- (D) 8
- (E) 7

15. If $p^2 - r^2 = 18$ and $p - r = 2$, what is $p + r$?

- (A) 5
- (B) 9
- (C) 13
- (D) 16
- (E) 18

$$\begin{aligned}x + 2y - 3z &= 92 \\2x - y + z &= 36 \\4x - y + 2z &= 12\end{aligned}$$

19. Based on the system of equations above, what is the value of x ?

- (A) 11
- (B) 20
- (C) -40
- (D) -42
- (E) It cannot be determined from the information given.

20. If $x + y = m$ and $x - y = n$, then what is $x^2 + y^2$, in terms of m and n ?

- (A) mn
- (B) $\frac{m^2 + n^2}{2}$
- (C) $(m - n)^2$
- (D) $(m + n)^2$
- (E) $\frac{m^2 - n^2}{2}$

13. $3x + 7y = 22$ and $2x + 6y = 12$, what is $13x + 13y$?

- (A) 34
- (B) 58
- (C) 72
- (D) 130
- (E) 156

7. If $3x^2 = 4y = 12$, what is the value of $x^2 y$?

- (A) 48
- (B) 36
- (C) 24
- (D) 12
- (E) 6

14. If $(2x - 5)(2x + 5) = 5$, what is the value of $4x^2$?

- (A) -30
- (B) -20
- (C) 10
- (D) 20
- (E) 30

16. If $3a + 4b = b$, which of the following must equal $6a + 6b$?

- (A) 0
- (B) 12
- (C) $2b$
- (D) $12b$
- (E) $6b - 8$

12. If $\frac{3x + y}{y} = \frac{6}{5}$, what is the value of $\frac{x}{y}$?

10. If $(x + y)^2 = 100$ and $(x - y)^2 = 16$, what is the value of xy ?

- (A) 6
- (B) 10
- (C) 21
- (D) 25
- (E) 29

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6. If $6x + 4 = 7$, what is the value of $6x - 4$?

- (A) -7
- (B) -1
- (C) 1
- (D) 7
- (E) 8

5. If $\sqrt{3} = x + 1$, what is the value of $(x + 1)^2$?

- (A) $\sqrt{2}$
- (B) $\sqrt{3}$
- (C) 3
- (D) 9
- (E) 16

12. If $x^2 - y^2 = 77$ and $x + y = 11$, what is the value of x ?

3. If $x + 3 = a$, then $2x + 6 =$

- (A) $a + 3$
- (B) $a + 6$
- (C) $2a$
- (D) $2a + 3$
- (E) $2a + 6$

14. If $4(x + y)(x - y) = 40$ and $x - y = 20$, what is the value of $x + y$?

5. If $\frac{x}{4} = \frac{2x}{a}$ and $x \neq 0$, what is the value of a ?

- (A) 8
- (B) 4
- (C) 2
- (D) $\frac{1}{2}$
- (E) $\frac{1}{4}$

15. If $x^2 - y^2 = 10$ and $x + y = 5$, what is the value of $x - y$?

2. If $2x - 10 = 20$, then $x - 5 =$

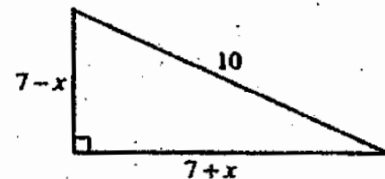
- (A) 5
- (B) 10
- (C) 15
- (D) 20
- (E) 30

2. If $a(x + y) = 45$ and $ax = 15$, what is the value of ay ?

- (A) 3
- (B) 5
- (C) 15
- (D) 25
- (E) 30

8. If $2x + z = 2y$ and $2x + 2y + z = 20$, what is the value of y ?

- (A) 5
- (B) 8
- (C) 10
- (D) 15
- (E) It cannot be determined from the information given.



Note: Figure not drawn to scale.

15. The figure above is a right triangle. What is the value of $49 + x^2$?

- (A) 50
- (B) 51
- (C) 72
- (D) 98
- (E) 100