

Grade	Subject	Chapter	lesson	Worksheets	Date
<u>9</u>	<u>Math</u>	<u>8</u>	<u>All</u>	<u>1</u>	<u>6/4/2022</u>

Student's Name :

Write the letter for the correct answer in the blank at the right of each question.

- Write $4x^2 - 6x + 2x^5 + 3$ in standard form.
 A $3 - 6x + 4x^2 + 2x^5$ C $2x^5 + 4x^2 - 6x + 3$
 B $4x^2 + 3 + 2x^5 - 6x$ D $-6x + 4x^2 + 3 + 2x^5$
- Find $(9t^2 + 4t - 6) - (t^2 - 2t + 4)$.
 F $8t^2 + 6t - 10$ G $8t^2 + 2t - 2$ H $9t^2 + 6t - 2$ J $9t^2 + 6t - 10$
- Simplify $2a^2(5a - 6) - 5a(a^2 - 3a + 4) - 7(a - 5)$.
 A $5a^3 + 3a^2 - 27a + 35$ C $5a^3 - 27a^2 + 13a - 35$
 B $5a^3 - 10a - 7$ D none of these
- Factor $24x^2y - 66xy^2 + 54x^2y^2$ completely.
 F $2xy(12x - 33y + 27xy)$ H $(4x^2 + 6y)(6x - 9y^2)$
 G $6x^2y^2(4y - 11x + 9)$ J $6xy(4x - 11y + 9xy)$
- Each side of a square x units long is decreased by 9 units. Which expression represents the area of the new square in square units?
 A $x^2 - 81$ C $x^2 - 18x + 81$
 B $x^2 - 18x + 18$ D $2x - 18$
- Solve $(3w + 4)(2w - 7) = 0$.
 F $\left\{-\frac{3}{4}, \frac{2}{7}\right\}$ G $\left\{\frac{2}{4}, -\frac{2}{7}\right\}$ H $\left\{-\frac{4}{2}, \frac{7}{2}\right\}$ J $\left\{\frac{4}{2}, -\frac{7}{2}\right\}$
- Factor $x^2 - 10x + 9$.
 A $(x - 1)(x - 9)$ C $(x - 1)(x + 9)$
 B $(x + 1)(x + 9)$ D $(x + 1)(x - 9)$
- Find $(3y - 4)(2y^2 + y - 1)$.
 F $6y^3 - 5y^2 - 7y - 4$ H $6y^3 - 5y^2 - 7y + 4$
 G $6y^3 - 7y^2 - 7y + 4$ J $6y^3 - 5y^2 + 7y + 4$
- Factor $15g^3h^2 - 35g^2h + 40g$ completely.
 A $5g(3g^2h^2 - 7gh + 8)$ C $5(3g^3h^2 - 7g^2h + 8g)$
 B $15g^2h(gh - 3g + 4)$ D $g(15g^2h^2 - 35gh + 40)$
- Find $(4a^2 + b)^2$.
 F $16a^4 + b^2$ H $8a^4 + b^2$
 G $16a^4 + 8a^2b + b^2$ J $4a^4 + 8a^2b + b^2$
- Factor $5x^2 - 13x + 6$.
 A $(x + 3)(5x - 2)$ B $(x - 2)(5x - 3)$ C $(x + 2)(5x + 3)$ D $(x - 3)(5x + 2)$

12. Solve $4x^2 = 20x$.

F $\{0, 4\}$

G $\{0, 5\}$

H $\{0, -4\}$

J $\{0, -5\}$

13. Factor $121r^2 - 64t^2$.

A $(11r + 8t)(11r - 8t)$

B $(11r - 8t)(11r - 8t)$

C $(11r + 8t)(11r + 8t)$

D prime

14. Solve $6(n - 11) = 12 + 4(2n - 3)$.

F -11

G 11

H -33

J 33

15. Factor $9x^2 + 48xy + 64y^2$.

A $(3x + 8y)^2$

B $(3x - 8y)^2$

C $(3x + 8y)(3x - 8y)$

D $(3x + 3y)(8x - 8y)$

16. Which binomial is a factor of $6x^2 + 48x + 96$?

F $x + 4$

G $3x + 8$

H $3x + 16$

J $6x + 16$

17. If the area of a rectangle is represented by $x^2 + x - 42$ square feet, which could be the length of a side of the rectangle?

A $x - 7$ ft

B $x - 6$ ft

C $x + 6$ ft

D $x + 13$ ft

18. **SOCCER** Julian kicked a soccer ball into the air with an initial upward velocity of 40 feet per second. The height h in feet of the ball above the ground can be modeled by $h = -16t^2 + 40t$, where t is the time in seconds after Julian kicked the ball. Find the time it takes the ball to return to the ground.

F $\frac{2}{5}$ s

G $1\frac{1}{3}$ s

H $1\frac{3}{4}$ s

J $2\frac{1}{2}$ s

19. Factor $2x^2 + 6x + 54 + 18x$ by grouping.

A $2(x - 9)(x - 3)$

B $(x + 18)(2x + 3)$

C $(x - 18)(2x - 3)$

D $2(x + 9)(x + 3)$

20. The area of a square is represented by $16x^2 - 8x + 1$ square centimeters. What expression represents the length of each side of the square?

F $x - 4$ cm

G $x + 4$ cm

H $4x - 1$ cm

J $4x + 1$ cm

Bonus Find the value of c that will make $9x^2 + 30x + c$ a perfect square trinomial.