

Expression and Equations Level 2-Part 1

1. If $\frac{x-y}{y} = \frac{1}{2}$ what is the value of x/y ?
2. If $\frac{x-y}{y} = \frac{5}{7}$ what is the value of x/y ?
3. If $\frac{x-y}{y} = \frac{4}{8}$ what is the value of x/y ?
4. Solve for x : $\frac{x+6}{x-9} = 8$
5. Solve for x : $\frac{x+5}{x-8} = 2$
6. Solve for x : $\frac{x+3}{x-7} = 7$
7. What is the factored form of: $x^2 - 3x - 10$
8. What is the factored form of: $x^2 - 5x + 6$
9. What is the factored form of: $x^2 - 7x + 10$
10. What is the factored form of: $x^2 - x - 12$
11. What is the factored form of: $25h^2 - 30he + 9e^2$
12. What is the factored form of: $16x^2 - 40xy + 25y^2$
13. What is the factored form of: $9z^2 + 30zp + 25p^2$
14. What is the factored form of: $9z^2 - 18zp + 9p^2$
15. What are the values of x when: $(x - 7)^2 + 8(x - 7) + 15 = 0$?
16. What are the values of x when: $(x + 5)^2 - 8(x + 5) + 16 = 0$?
17. What are the values of x when: $(x + 4)^2 - 4(x + 4) - 12 = 0$?
18. What are the values of x when: $(x + 7)^2 - 7(x + 7) + 12 = 0$?
19. What are the values of x when: $(x - 5)^2 - 5(x - 5) + 6 = 0$?
20. What are the values of x when: $(x - 4)^2 + 9(x - 4) + 14 = 0$?

Answers

1	$\frac{3}{2}$
2	$\frac{12}{7}$
3	$\frac{12}{8}$
4	$x = \left(\frac{78}{7}\right)$
5	$x = \left(\frac{21}{1}\right)$
6	$x = \left(\frac{52}{6}\right)$
7	$(x - 5)(x + 2)$
8	$(x - 3)(x - 2)$
9	$(x - 2)(x - 5)$
10	$(x - 4)(x + 3)$
11	$(5h - 3e)^2$
12	$(-4x + 5y)^2$
13	$(-3z - 5p)^2$
14	$(-3z + 3p)^2$
15	$x = 12 \text{ and } x = 10$
16	$x = -9 \text{ and } x = -9$
17	$x = -2 \text{ and } x = -10$
18	$x = -11 \text{ and } x = -10$
19	$x = 3 \text{ and } x = 2$
20	$x = 6 \text{ and } x = 11$