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	$x = 2\ and\ x = 4$
16	$x = -1$
17	$x = -6\ and\ x = 2$
18	$x = -4\ and\ x = -3$
19	$x = 7\ and\ x = 8$
20	$x = -3\ and\ x = 2$