Algebra Refresher #1

Show work clearly and completely on separate paper for each exercise. **** No calculator allowed ****

1. Expand: $(2x-3)^2$

2. Simplify: $\frac{3}{4}+\frac{5x}{6}$

3. Simplify: $3\sqrt{48}$

4. Expand: $(2m-3)(m+6)$

5. Solve for x: $5-2(3-x)=x+2-5x$

6. Factorise: $2x^2-6x-20$

7. Simplify: $\frac{1}{a-6}+\frac{a}{a+8}$

8. Factorise: $4h^2-25$

9. Solve for y: $\frac{3}{y}=\frac{2}{2-y}$

10. Simplify: $3(2a^2b)^3$

11. Solve for x: $x^2=5-4x$

12. Expand: $(x-2)^3$

13. Simplify: $\frac{5}{2}-\frac{a-2}{6}$

14. Simplify: $\frac{3(x-h)^2-3x^2}{h}$

15. Simplify: $\frac{x}{y}-\frac{x}{z}$

16. Simplify: $\frac{\frac{a}{b}+1}{\frac{3}{b}}$

17. Factorise: $4n^4-26n^3-14n^2$

18. Solve for w: $6w-wy=2y+3$

19. Simplify: $\frac{x^2+2x+1}{x+1}$

20. Simplify: $\frac{3}{2x}-\frac{x+3}{y}$

21. Simplify: $\frac{p^2-9}{p^2-3p}$

22. Solve for a: $\frac{a-b}{4}=\frac{a}{b}$

23. Solve for y: $\frac{x-y}{x}=x+1$

24. Solve for z: $z^3-8z^2+15z=0$

25. Solve for x: $3|x-2|=12$

[answers attached]