Complex Number System

In problems 1-2, write each expression as a pure imaginary number.

1. $\sqrt{-25}$	2. $\sqrt{-60}$

In problems 3-4, write each expression as a complex number in standard form.

3. $\dfrac{6+\sqrt{-20}}{10}$	4. $\dfrac{3-\sqrt{-81}}{6}$

In problems 5-20, perform the indicated operation.

5. $(4+5i)+(7-2i)$	6. $(9-i)+(2+i)$
7. $(-2-4i)-(3-5i)$	8. $(4-7i)-(2-i)$
9. $(4+i)(2-i)$	10. $(8+3i)(1-5i)$
11. $(5+i)^2$	12. $(2-4i)^2$
13. $-8i(3+i)$	14. $\sqrt{-20}\cdot\sqrt{-12}$
15. $\dfrac{10-i}{i}$	16. $\dfrac{5}{3+2i}$
17. $\dfrac{6+4i}{1-i}$	18. i^{31}
19. i^{15}	20. i^{-17}