

## COMPLEX NUMBERS PRACTICE ANSWERS

Express in terms of  $i$ :

1.  $\sqrt{7}i$

2.  $4i$

3.  $-\sqrt{5}i$

4.  $-5i$

5.  $6i$

Simplify:

6.  $-\sqrt{10}$

7.  $\sqrt{10}i$

8.  $\sqrt{\frac{2}{3}}$

9.  $3\sqrt{2}i + 2\sqrt{3}i$

10.  $i$

11.  $2\sqrt{5}$

12.  $3i$

13.  $\frac{\sqrt{10}i}{2} = \frac{\sqrt{5}i}{\sqrt{2}}$

14. 1

15.  $-i$

16.  $-1$

17. 1

18.  $11 + 5i$

19.  $9 + 3i$

20.  $9 + 10i$

21.  $-8 + 4i$

22.  $36 + 12i$

23.  $8 + 9i$

24.  $5 + 12i$

25.  $7 + 24i$

Simplify and put your answer in standard form  
(i.e., no  $i$ s in the denominator, or  $a+bi$  form)

26.  $\frac{8}{5} + \frac{6}{5}i$

27.  $\frac{12}{13} - \frac{5}{13}i$

28.  $\frac{1}{2} + \frac{\sqrt{3}}{2}i$

29.  $\frac{7}{10} + \frac{7}{5}i$

30.  $\frac{1}{2} - \frac{3}{2}i$

31.  $\frac{12}{13} + \frac{18}{13}i$

32.  $-2 + i$

33.  $\frac{1}{5} + \frac{13}{5}i$

34.  $3 + 3i$

35.  $\frac{11}{5} + \frac{13}{5}i$