

Math 152B, Fall 2012

Chapter 6 review for test on October

You will not need to know the formulas for area of triangle or parallelogram. You do need to know the area of a rectangle. This is due on Wednesday as a homework assignment. You may turn it in to me before our exam.

1. What does GCF stand for?
2. What is the GCF for $91X^2$ and $143X$?
3. Factor out the GCF for: $a^6b^7 + a^4b^4 - a^3b^9 + a^2b^5$
4. Factor completely, using grouping: $30x^3 - 6x^2 + 25x - 5$
5. Multiply $(n+8)(n-4)$
6. A number that has no factors other than itself and 1 is _____
7. Factor completely: $2z^2 + 20z + 32$
8. Factor $X^2 + Xy - 2y^2$.
9. Factor $3x^4 - 5x^2 - 8$ See various attempts to factor on P. 392
10. $4m^2 - 4m + 1$ is an example of a (an) _____
11. Factor $20r^2 + 27r - 8$
12. Find two numbers whose product is 30, and whose sum is -13 .

13. The binomial $(x^2 - 9)$ is called a _____
14. Factor $y^2 - 16$; Factor $9x^3 - 25x$
15. A sum of cubes is written _____
16. Factor $r^3 + 27$
17. Factor $24x^3 - 81y^3$
18. An object is dropped from Pittsburgh's USX Tower, which is 841 ft. tall.
The height of the object after t seconds is given by $h = 841 - 16t^2$
- a) Find the height of the object after 2 seconds. b) After 5 seconds.
19. Solve by factoring. See zero factor theorem on P. 413. $(x-3)(x+1) = 0$
20. Solve by factoring $(M-5)(2m+7) = 0$. Solve $x(x-2) = 0$
21. Find two consecutive integers whose product is 41 more than their sum.
22. Write out the steps for factoring a quadratic equation. P. 416)
23. One leg of a right triangle is 9 inches longer than the other leg. The hypotenuse is 45 inches. Find the length of the 2nd leg of the triangle. (See Pythagorean Theorem on P. 425.)
24. T/F: If $X(X-2) = 8$, then $X = 2$ or $X = 8$.
25. Find two consecutive odd integers whose product is 23 more than their sum. (See Eg. 4, P. 425.)

