

Skills Maintenance #10
Inventory of Skills

Name _____
Pd _____ Date _____

Simplify.

1. $(3x^3 - 5x^2 + x) - (x^3 - 3x^2 + 4x)$

2. $-3m^2n(2mn^3 - m^2n^2)$

3. $(2a + 1)(3a - 4)$

4. $\frac{(3a^2b)(2ab)^2}{12a^3b}$

5. $\frac{16x^2 - 4x}{4x}$

6. $\frac{2x^2 - 18}{12} \cdot \frac{4}{2x + 6}$

7. $\frac{1}{a + b} + \frac{2}{a - b}$

8. $\sqrt{54}$

9. $\frac{1}{\sqrt{3}}$

10. $(5\sqrt{2})^2$

Factor.

11. $a^2 - 81$

12. $3a^2 + 12a - 15$

13. $x^2 - 3x - 54$

14. $2a^2 - 5a - 3$

Answers
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.

Solve each equation or system.

15. $3(n - 4) + 2 = n + 3(n - 1)$

16. $x^2 = 4x + 45$

17. $\frac{2}{3x} - \frac{5}{2x} = 1$

18.
$$\begin{aligned} 2x - 3y &= -14 \\ x + y &= 3 \end{aligned}$$

19. $\frac{5}{x - 7} = \frac{3}{x + 1}$

20. Use the quadratic formula to solve
 $x^2 - 27 = -6x$

15.
16.
17.
18.
19.
20.