Algebra 2 Name_____ ID: 1

NTID 4 ACTReview

Date_____ Period____

Simplify each expression.

1) $-5b(-2-b)+6b(3b+1)$

2) $2x(2x+2)-8(5x+3)$

Solve each equation.

3) $-12(12k-12)+k=-(k+6)+8k$

4) $12-10(1-6n)=12(1+5n)$

5) $6|8+6n|-2=22$

6) $8|3-x|-10=-10$

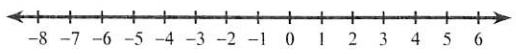
Solve each inequality and graph its solution.

7) $18-2n>2+3(-n+8)$

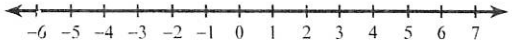
8) $5r+30\geq 3(1-3r)-1$

Solve each compound inequality and graph its solution.

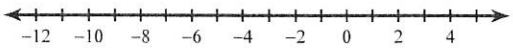
9) $11-4x\leq -8x+11<-8x-12$



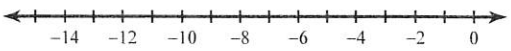
10) $-7-3r<-10-2r$ or $10+5r<3r+6$



11) $9+7x\leq 5x-7$ or $3-9x\leq 3-7x$

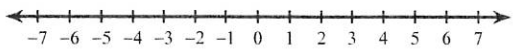


12) $7r-12\leq 10r-3$ or $1+8r\leq 7r-11$

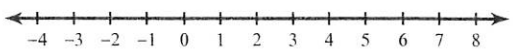


Solve each inequality and graph its solution.

13) $|2+8x|\geq 18$



14) $|9n-7|>20$



Write the slope-intercept form of the equation of each line given the slope and y-intercept.

15) Slope $=\frac{4}{5}$, y-intercept $=0$

Write the standard form of the equation of the line through the given points.

16) through: $(-2, 1)$ and $(2, 0)$

Write the slope-intercept form of the equation of the line described.

17) through: $(3, 1)$, parallel to $y=\frac{1}{4}x$

Write the standard form of the equation of the line described.

18) through: $(-3, -1)$, perp. to $y = -\frac{3}{2}x + 5$

NTID 4

Write the slope-intercept form of the equation of each line.

19) $2y + 16x = 10$

Write the standard form of the equation of each line.

20) $-\frac{1}{5}y = 1 - \frac{2}{5}x$

Solve each system by elimination.

21) $44 = -10y - 4x$
$0 = 3y + 3 - 9x$

22) $-42x = -210y - 84$
$30y - 6x = -12$

Solve each system by substitution.

23) $-3x - 2y = -5$
$2x - y = 22$

24) $-4x + 5y = 4$
$4x - 4y = -8$

Simplify.

25) $\sqrt{20u^3v^3}$

26) $\sqrt{98uv^2}$

27) $7\sqrt[3]{-81x^2y^3}$

28) $-5\sqrt[5]{256x^8y^4}$

29) $-3\sqrt{20} + 3\sqrt{27} - \sqrt{5}$

30) $2\sqrt{6} + 2\sqrt{3} - \sqrt{3}$

31) $(100000x^5)^{\frac{4}{5}}$

32) $(1000x^3)^{\frac{4}{3}}$

Simplify. Your answer should contain only positive exponents.

33) $3x^2y^4 \cdot 4xy^{-1}$

34) $3ba^2 \cdot 4ab^{-1}$

Solve each equation. Remember to check for extraneous solutions.

35) $45 = 5\sqrt{78 - x}$

36) $-5 + \sqrt{3x + 19} = 2$

Use the information provided to write the standard form equation of each circle.

37) Center: $(13, -11)$
Radius: 1

38) Center: $(3, -4)$
Radius: 11