Algebra 1

Name_____ ID: 1

Assignment

Date_____ Period____

Solve each equation.

1) $16 + 4p = -4(3p + 4)$

2) $-2a - 4(4a + 4) = 3 + a$

3) $17 + b = -3(1 + b) - b$

4) $x - 3(x + 2) = -x - 5$

5) $-\dfrac{32}{9} = 2 + 5x$

6) $-\dfrac{3}{28} = -x - \dfrac{1}{4}$

7) $\dfrac{1}{4} + \dfrac{1}{2}x = -\dfrac{7}{36}$

8) $\dfrac{5}{3}(a - 2) = -\dfrac{10}{3}$

Solve each equation for the indicated variable.

9) $\dfrac{3k}{4x} = 1$, for x

10) $z = -\dfrac{4x}{3}$, for x

11) $u = -3 + 2x$, for x

12) $-2x - m = -5$, for x

13) $g = 3a$, for a

14) $g = -4a + 2$, for a

15) $u = 2x$, for x

16) $-8ac = -3$, for a

17) $-2a + m = 6$, for a

18) $u = 8x$, for x

Solve each inequality.

19) $-10v > -70$

20) $-27 > -11 + r$

21) $k - 7 \geq -7$

22) $n - 19 \leq -2$

23) $-18 \leq 3(-1 + p)$

24) $2(n + 4) < 10$

25) $-24 \geq -3n + 3$

26) $-2 > -4 - 2p$

27) $-48 < 3(4b - 4)$

28) $-3 + 2(4b - 4) \leq -43$

29) $-4(2p + 3) \leq -44$

30) $4(-2v + 4) \leq 48$

31) Tom goes to the movies with $50.
After paying the movie admission of
$15.00, he now has enough money to buy
exactly 7 bags of candy (each bag of
candy costs the same amount).
He buys a soda for $8.00 and a hot dog for
$7.00.
How much money does Tom need to buy 5
bags of candy?

32) Sarah goes to a broadway show and brings
$180 with her. After paying $105 for a
ticket to get in she has enough money to
buy exactly 3 souvenir t-shirts.
Sarah purchases a program for $12, a
beverage for $9, and a snack for $8. How
much more money does sarah need to buy
2 souvenir t-shirts?

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Solve each equation.

1) $16 + 4p = -4(3p + 4)$

$\{-2\}$

2) $-2a - 4(4a + 4) = 3 + a$

$\{-1\}$

3) $17 + b = -3(1 + b) - b$

$\{-4\}$

4) $x - 3(x + 2) = -x - 5$

$\{-1\}$

5) $-\dfrac{32}{9} = 2 + 5x$

$\left\{-\dfrac{10}{9}\right\}$

6) $-\dfrac{3}{28} = -x - \dfrac{1}{4}$

$\left\{-\dfrac{1}{7}\right\}$

7) $\dfrac{1}{4} + \dfrac{1}{2}x = -\dfrac{7}{36}$

$\left\{-\dfrac{8}{9}\right\}$

8) $\dfrac{5}{3}(a - 2) = -\dfrac{10}{3}$

$\{0\}$

Solve each equation for the indicated variable.

9) $\dfrac{3k}{4x} = 1$, for x

$x = \dfrac{3k}{4}$

10) $z = -\dfrac{4x}{3}$, for x

$x = -\dfrac{3z}{4}$

11) $u = -3 + 2x$, for x

$x = \dfrac{u + 3}{2}$

12) $-2x - m = -5$, for x

$x = \dfrac{-m + 5}{2}$

13) $g = 3a$, for a

$a = \dfrac{g}{3}$

14) $g = -4a + 2$, for a

$a = \dfrac{-g + 2}{4}$

15) $u = 2x$, for x

$x = \dfrac{u}{2}$

16) $-8ac = -3$, for a

$a = \dfrac{3}{8c}$

17) $-2a + m = 6$, for a

$$a = \frac{m - 6}{2}$$

18) $u = 8x$, for x

$$x = \frac{u}{8}$$

Solve each inequality.

19) $-10v > -70$

$v < 7$

20) $-27 > -11 + r$

$r < -16$

21) $k - 7 \geq -7$

$k \geq 0$

22) $n - 19 \leq -2$

$n \leq 17$

23) $-18 \leq 3(-1 + p)$

$p \geq -5$

24) $2(n + 4) < 10$

$n < 1$

25) $-24 \geq -3n + 3$

$n \geq 9$

26) $-2 > -4 - 2p$

$p > -1$

27) $-48 < 3(4b - 4)$

$b > -3$

28) $-3 + 2(4b - 4) \leq -43$

$b \leq -4$

29) $-4(2p + 3) \leq -44$

$p \geq 4$

30) $4(-2v + 4) \leq 48$

$v \geq -4$

31) Tom goes to the movies with $50.
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