Algebra 1

HW11: Rewriting Equations

Solve each equation for the indicated variable. Simplify expressions as far as possible.

1) $u = x + k$, for x

2) $z = \frac{a}{m}$, for a

3) $z = x + m$, for x

4) $z = x - m$, for x

5) $z = ma$, for a

6) $u = k + a$, for a

7) $u = \frac{x}{k}$, for x

8) $g = x - c$, for x

9) $g = a - c$, for a

10) $z = a + m$, for a

11) $3x - 4y = -20$, for y

12) $3x - 4y = 16$, for y

13) $x + y = -9$, for y

14) $3x + y = -2$, for y

15) $y - 2 = \frac{1}{4}(x + 4)$, for y

16) $y - 3 = \frac{5}{3}(x - 3)$, for y

17) $y + 4 = -\frac{1}{4}(x + 4)$, for y

18) $y - 4 = -2(x + 3)$, for y

19) The formula to change temperature from °C to °F is:
$F = \frac{9}{5}C + 32$
Rewrite this formula to change °F to °C (i.e. solve for C)

20) Use the formula from #19 to find the temperature in °C if the the temperature is 78°F. Round to the nearest tenth of a degree.

21) Use the formula from #19 to find the temperature, to the nearest tenth of a degree, in °C, if the the temperature is −16 °F.

22) The formula for circumference of a circle is $C = 2\pi r$, where C is the circumference and r is the radius. Rewrite this formula to highlight the radius.

23) Use the formula from #22 to find the radius of the circle if the circumference is 51 meters. Round to the hundredths place. (Remember invisible parentheses!)

24) Use the formula from #22 to find the radius of the circle if the circumference is 671π feet. Round to the tenths place. (Remember invisible parentheses!)

Evaluate each using the values given.

25) $y - y^2 - z$; use $y = -4$, and $z = 15$

Simplify each expression.

26) $3.3 + 5.1n - 8.9n$

27) $4.6r - 1.8 + r + 8.15$

28) $-9(3n - 10) - 5n$