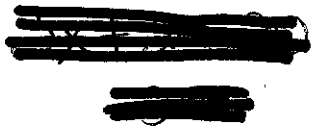
Key NAME:

Write equation and solve:

1. Jill made 20 muffins. She put them into 3 boxes and has two muffins left. How many are in each box if they all contain the same amount of muffins?



$3x+2=20$
$-2 \quad -2$
$3x=18$
$x=6$

6 muffins in each box

2. Kendra is buying bottled water for a class trip. She has 16 bottles left over from the last trip. She buys bottles by the case to get a good price. Each case holds 24 bottles. How many cases will she have to buy if she wants to have a total of 160 bottles of water?

$24x+16=160$
$-16 \quad -16$

$24x=144$

$x=6$ cases

Solve each equation. Show your work.

$0 = 4 + \frac{n}{5}$

$-4 \quad -4$

$-4 = \frac{n}{5}$ (multiply both sides by 5)

$-20 = n$

$2(n+5) = -2$

$2n + 10 = -2$

$-10 \quad -10$

$\frac{2n}{2} = \frac{-12}{2}$

$n = -6$

$-9x + 1 = -80$

$-1 \quad -1$

$-9x = -81$

$x = 9$

$\frac{v+9}{3} = 8$ (multiply both sides by 3)

$v + 9 = 24$

$-9 \quad -9$

$v = 15$

7 Dr. Karev orders a 440 mg of Amoxicillin to be taken by a 64.2 lb. child every 8 hours. The medication label shows that 125-275 mg/kg per day is the appropriate dosage range. Is Dr. Karev's order within the desired range? (The conversion from kg to lbs. is 1kg/2.2lbs.)

a. What is the minimum dosage? 3647.73

$$\frac{64.2}{1} \cdot \frac{1}{2.2} \cdot 125$$

b. What is the maximum dosage? 8025

$$\frac{64.2}{1} \cdot \frac{1}{2.2} \cdot 275$$

c. How much Amoxicillin is the child taking each day? 1320

[redacted] 440 X 3 (24 ÷ 8 = 3)

d. Is Dr. Karev's order within the desired range? NO

8 Dr. Kepner orders a 760 mg of Amoxicillin to be taken by a 96.4 lb. child every 6 hours. The medication label shows that 25-140 mg/kg per day is the appropriate dosage range. Is Dr. Kepner's order within the desired range? (The conversion from kg to lbs. is 1kg/2.2lbs.)

a. What is the minimum dosage? 1095.45

$$\frac{96.4}{1} \cdot \frac{1}{2.2} \cdot 25 = 1095.45$$

b. What is the maximum dosage? 6134.55

$$96.4 \times \frac{1}{2.2} \times 140$$

c. How much Amoxicillin is the child taking each day? 3040

760 X 4 = 3040 (24 ÷ 6) = 4

d. Is Dr. Kepner's order within the desired range? ~~yes~~

Convert the following quantities.

9. 565,900 seconds into days

$$\frac{565900\ \text{sec}}{1} \cdot \frac{1\text{min}}{60\text{sec}} \cdot \frac{1\text{hr}}{60\text{min}} \cdot \frac{1\text{day}}{24\text{hr}} = 6.55\ \text{days}$$

10. 17 years into minutes

$$\frac{17\text{yr}}{1} \cdot \frac{365\text{days}}{1\text{year}} \cdot \frac{24\text{hr}}{1\text{day}} \cdot \frac{60\text{min}}{1\text{hr}} = 8935200\ \text{min}$$

[redacted]

11. 165 pounds into kilograms

[redacted] $\frac{165\text{lbs}}{1} \cdot \frac{.45\text{kg}}{1\text{lb}} = 74.25\ \text{kg}$

12. 100 yards into meters

$$\frac{100\text{yds}}{1} \cdot \frac{3\text{ft}}{1\text{yd}} \cdot \frac{1\text{meter}}{3.28\text{ft}} = 91.46\ \text{meters}$$

13. 22,647 inches into miles

$$\frac{22647}{1} \cdot \frac{1\text{ft}}{12\text{inch}} \cdot \frac{1\text{mile}}{5280\text{ft}} = .36\ \text{miles}$$

14. 2678 cm into feet

$$\frac{2678\text{cm}}{1} \cdot \frac{1\text{inch}}{2.54\text{cm}} \cdot \frac{1\text{ft}}{12\text{inch}} = 87.86\text{ft}$$

5. Convert 8 quarts to liters.

$$\frac{8\text{qts}}{1} \cdot \frac{1\text{liter}}{1.05\text{qt}} = 7.62\text{L}$$

over →

USE PEMDAS TO SOLVE:

$(6+7^2)+1$

$6+49+1 = 56$

$6-(8+3^3)-4$

$6-(8+27)-4$

$6-35-4 = -33$

$6 \times (2 \div 1) \div 1$

$6 \times 2 \div 1 = 12$

$(7+8-4^2) \times 2+1$

$-1 \times 2+1 = -1$

Convert.

20. 2,000 m = 2 km

21. 9,000 ml = 9 L

22. 6 L = 6000 ml

23. 6 cm = 60 mm

24. 1,000 m = 1 km

25. 50 mm = 5 cm