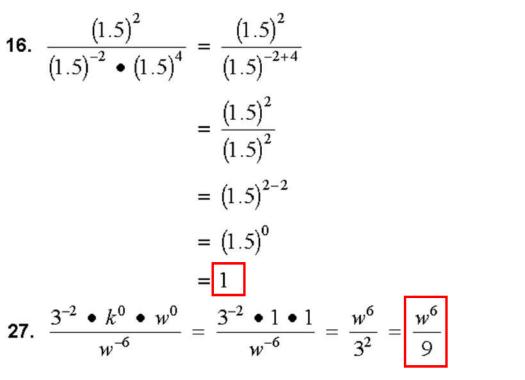
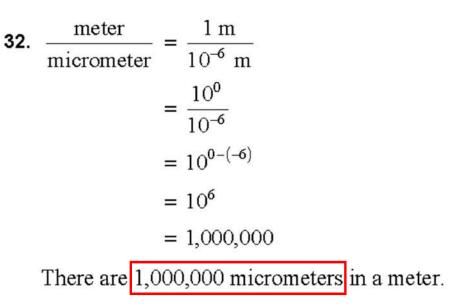
16.4 Exercises Pg. 732 # 16, 27 (# 32, 34 Optional) [ANSWER KEY]





16.4 Exercises Pg. 732 # 16, 27 (# 32, 34 Optional) [ANSWER KEY]

34. a. $\frac{500}{10^{-3}} = 500 \cdot 10^3 \text{ mm}^3$

The donation is $500 \cdot 10^3$ cubic millimeters.

$$500 \bullet 10^{3} \bullet 10^{4} = 500 \bullet 10^{3+4}$$
$$= 500 \bullet 10^{7}$$
$$= 500 \bullet 10,000,000$$
$$= 5,000,000,000$$

There are about five billion white blood cells in the donation.

b. $500 \times 10^3 \times 5 \times 10^6 = 500 \times 5 \times 10^3 \times 10^6$

- $= 2500 \times 10^{3+6}$
- $= 2500 \times 10^{9}$
- $= 2500 \times 1,000,000,000$
- = 2,500,000,000,000

There are about two trillion five hundred billion red blood cells in the donation.

c. The ratio of red blood cells to white blood cells is $\frac{2,500,000,000,000}{5,000,000} = \frac{500}{1}$ There are about 500 times more red blood cells than white blood cells.