

Pre-Algebra Review

Warm-up #2

Show all work and circle your answer.

Name: Key

Date: _____ Pd: _____

1. $3\frac{3}{4} + 2\frac{5}{6}$
 $3\frac{9}{12} + 2\frac{10}{12}$
 $5\frac{19}{12}$
 $6\frac{7}{12}$

2. $5\frac{1}{2} - 1\frac{2}{3}$
 $5\frac{3}{6} - 1\frac{4}{6}$
 $4\frac{9}{6} - 1\frac{4}{6}$
 $3\frac{5}{6}$

3. $78.3 + 2.58$
 80.88

4. $48 - .39$
 47.61

5. $2\frac{1}{3} \times 4\frac{1}{5}$
 $\frac{7}{3} \times \frac{21}{5}$
 $\frac{49}{5}$
 $9\frac{4}{5}$

6. $4 \div \frac{2}{5}$
 $\frac{24}{1} \times \frac{5}{2}$
 10

7. 1.25×4.5
 5.625

$$\begin{array}{r} 1.25 \text{ ②} \\ \times 4.5 \text{ ①} \\ \hline 625 \\ +5000 \\ \hline 5.625 \text{ ③} \end{array}$$

8. $2.25 \div 1.8$
 $22.5 \div 18$
 1.25

$$\begin{array}{r} 1.25 \\ 18 \overline{) 22.50} \\ \underline{-18} \downarrow \\ 45 \\ \underline{-36} \downarrow \\ 90 \\ \underline{-90} \\ 0 \end{array}$$

Show all work and answer in a complete sentence.

9. Last year PS had 850 students. This year it is expected that our enrollment will increase by 6%. Estimate the number students we should expect to have this year.

$$\text{Inc} = 850(0.06)$$

$$\text{Inc} = 51$$

$$\text{Total} = 850 + 51$$

$$\text{Total} = 901$$

PS should expect about 901 students this year.

10. Kevin sells bottles of water at a local park. He has sold 28, 35, 17, 50, and 41 bottles over the past 5 weekends. (a) What is the mean number of bottles Kevin has sold? Round your answer to the nearest bottle. (b) How many bottles does he need to sell this weekend so that his new mean will be 40 bottles?

$$\text{(a) mean} = \frac{\text{Total}}{\# \text{ of weekends}}$$

$$\text{mean} = \frac{28+35+17+50+41}{5}$$

$$\text{mean} = \frac{171}{5}$$

$$\text{mean} = 34.2$$

The mean # of bottles sold per weekend is 34.

$$\text{(b) mean} = \frac{\text{Total}}{\# \text{ of weekends}}$$

$$40 = \frac{T}{6}$$

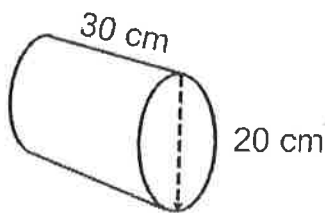
$$T = 240$$

$$\text{This weekend} = 240 - 171$$

$$\text{This weekend} = 69$$

Kevin needs to sell 69 bottles this weekend so that his new mean would be 40 bottles.

11. Find the surface area and volume of this cylinder to the nearest hundredth. Show all work and include correct units in your final answer.



$$SA = 2B + C \cdot h$$

$$SA = 2(\pi)(10)^2 + \pi(20)(30)$$

$$SA = 200\pi + 600\pi$$

$$SA = 800\pi \text{ sq. cm or } SA \approx 800(3.14) \approx 2512 \text{ sq. cm}$$

$$V = B \cdot h$$

$$V = \pi(10)^2(30)$$

$$V = 3000\pi \text{ cubic cm or } V \approx 3000(3.14) \approx 9420 \text{ cu. cm}$$

$$\text{Surface Area} = \frac{800\pi \text{ sq. cm}}{\text{or}}$$

$$SA \approx 2512 \text{ sq. cm}$$

$$\text{Volume} = \frac{3000\pi \text{ cu. cm}}{\text{or}}$$

$$V \approx 9420 \text{ cu. cm}$$