

Compute each of the following without a calculator.

- Round answers to 3 decimal places.
- Reduce all fractions to their simplest form.
- Simplify all radicals.

In order to receive your calculator license, you must get 17 of these problems absolutely correct! Take your time and check your work carefully. Do scrap work on a separate sheet of paper.

1) $3.6759 + 34.7653 =$

$$\begin{array}{r} 34.7653 \\ 3.6759 \\ \hline 38.4412 \end{array}$$

38.441

2) $13.5 \times 4.663 =$

$$\begin{array}{r} 13.5 \\ \times 4.663 \\ \hline 4065 \\ 8100 \\ 23215 \\ \hline 629505 \end{array}$$

62.951

3) $37.5 \div 7 =$

$$\begin{array}{r} 5.357 \\ 7 \overline{) 37.500} \\ \underline{35} \\ 25 \\ \underline{21} \\ 40 \\ \underline{35} \\ 50 \\ \underline{49} \\ 10 \end{array}$$

5.357

4) $4875 \div 124 =$

$$\begin{array}{r} 39.3145 \\ 124 \overline{) 4875.0000} \\ \underline{372} \\ 1155 \\ \underline{1116} \\ 390 \\ \underline{372} \\ 180 \\ \underline{124} \\ 560 \\ \underline{496} \\ 640 \\ \underline{620} \\ 20 \end{array}$$

39.315

5) $429 - 558 =$

$$\begin{array}{r} 429 \\ - 558 \\ \hline 129 \end{array}$$

-129

6) $4\frac{2}{7} + 2\frac{2}{9} =$

$$\frac{30}{7} + \frac{20}{9} = \frac{270}{63} + \frac{140}{63} = \frac{410}{63}$$

7) $\sqrt[4]{(4^3)^2} =$

$$= \sqrt[4]{4^6} = 4^{\frac{6}{4}} = 4^{\frac{3}{2}}$$

$= 2^3 = 8$

8) $\frac{3}{5} \times \frac{4}{7} =$

$\frac{12}{35}$

Precalculus CP 1 – 2.3 – 2.5 Quiz

$$9) \frac{3}{10} \div \frac{15}{320} = \frac{3}{10} \cdot \frac{320}{15}$$

$$= \frac{3}{10} \cdot \frac{64}{3} = \boxed{\frac{32}{5}}$$

$$10) \sqrt{13^2 - 12^2} = \sqrt{169 - 144}$$

$$= \sqrt{25} = \boxed{5}$$

$$11) 2^2(8 + 4(2^2 - (-5)^2) - 6) =$$

$$= 4(8 + 4(4 - 25) - 6)$$

$$= 4(8 + 4(-21) - 6)$$

$$= 4(8 - 84 - 6) = 4(-82)$$

$$= \boxed{-328}$$

$$12) 3\sqrt{28} + 2\sqrt{112} =$$

$$= 3(2\sqrt{7}) + 2(4\sqrt{7})$$

$$= 6\sqrt{7} + 8\sqrt{7}$$

$$= \boxed{14\sqrt{7}}$$

$\sqrt{28} = 2\sqrt{7}$
 $\sqrt{112} = 4\sqrt{7}$

$$13) (x+3)^0 = \boxed{1}$$

$$14) 6 \div 3 \frac{2}{7} =$$

$$6 \div \frac{23}{7} = \frac{6}{1} \cdot \frac{7}{23} = \boxed{\frac{42}{23}}$$

$$15) 27^{\frac{1}{3}} = \boxed{3}$$

$$16) 62\% \text{ of } 48 =$$

$$.62(48)$$

$$\begin{array}{r} 48 \\ \times 62 \\ \hline 96 \\ 288 \\ \hline 29.76 \end{array}$$

$$= \boxed{29.76}$$

Precalculus CP 1 – 2.3 – 2.5 Quiz

17) 72% of 83

$$\begin{array}{r} 83 \\ \cdot 72 \\ \hline 166 \\ 581 \\ \hline 59.76 \end{array}$$

19) $.035 = 3.5\%$

18) $\frac{3}{13} = 23.077\%$

$$\begin{array}{r} .230769 \\ 13 \overline{) 3.000} \\ \underline{26} \\ 40 \\ \underline{39} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

20) 56 is 65% of 86

$$\begin{aligned} 86x &= 56 \\ x &= \frac{56}{86} \end{aligned}$$

$$\begin{array}{r} .651162 \\ 86 \overline{) 56.000000} \\ \underline{516} \end{array}$$

$$\begin{array}{r} 440 \\ 430 \\ \hline 100 \\ 86 \\ \hline 140 \\ 86 \\ \hline 540 \\ 516 \\ \hline 240 \end{array}$$

65.1162%