

BE-Alg. 2 TUESDAY 8-18-09

Name EACH SET of numbers:

① $\{1, 2, 3, \dots\}$

② $\{0, 1, 2, 3, \dots\}$

③ $\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$

④ $\{\frac{a}{b}\}$ where a, b are members of set ③, $b \neq 0$

⑤ $\{\text{nonrepeating \& non-terminating decimals}\}$

⑥ $\{\text{sets ④ and ⑤}\}$

ACT
PRACTICE
'Barrows'
1 min.

In a shipment of 10,000 headlights, 5% are defective. What is the ratio of defective headlights to non-defective headlights?

$$10\% \text{ of } 10,000 = 1000 \therefore 5\% = \frac{1000}{2} = 500$$

$$\therefore \frac{\text{def}}{\text{non-def}} = \frac{500}{10,000 - 500} = \frac{500}{9500} = \frac{5}{95} = \boxed{\frac{1}{19}}$$

OR By definition $\frac{5}{95} \Rightarrow \frac{5\% \text{ def}}{95\% \text{ OK}} = \frac{1}{19}!$

Review: 8-17-09 Mon

Algebra 2 Homework - Ch. 1-1 and 1-2

This page is the cover page, it comes first. All that should be written on it is your name, class period and date. Show all work on attached looseleaf that is also properly labeled in the upper right-hand corner with name, period, and date. Showing work means: circle the problem number, write the original problem, neatly show all the key steps of your solution, box the answer.

No calculators.

The Glencoe web site for your book has a lot of good things to know about. Explore it. Some of the things may help you study these two sections of Chapter 1. Jot down anything you want to share with the class you thought was useful. Is there anything online that might reduce the number of notes you have to take and keep?

Bulldogmath.com has links to the Glencoe web site for your book, find them. Explore Bulldogmath.com.

Finish any forms you have not yet brought in. If you lost them or forgot them at school and don't know what to do, hint...do a better job of exploring Bulldogmath.com.

Find the value of the given expression.

1. $\frac{1}{2}[32 + (40(-42))]$

⇒ use PE (MD) (AS)
① ② ③ ④

2. $14 - 180 \div 5$

3. Evaluate the given expression if $w = 17$, $x = 29$, $y = 48$, and $z = 8$. ⇒ "Algebra" even fraction

$w + \frac{1}{x} + \frac{1}{y} + \frac{1}{z}$

or
option ⇒ common denominator

4. Evaluate the given expression if $x = 25$, $y = 10$, $w = 11$, and $z = 18$. ⇒ USE PARENTHESES TO

$(x - y)^2 + 10wz$

SUBSTITUTE

5. Name the sets of numbers to which the given number belongs. ⇒ $\sqrt{4} = 2 = \frac{2}{1}$

$\sqrt{4}$

6. Name the sets of numbers to which the given number belongs.

$\frac{28}{83}$

Algebra 2 Homework - Ch. 1-1 and 1-2 Answer Section

Simplify the given expression.

7. $10x + 41y - 142x + 2y$

8. $3(0.5x + 0.4y) + 15(0.3x - 0.8y)$

$1.5x + 1.2y + 4.5x - 12.0y$
 $6.0x - 10.8y$

SHORT ANSWER

1. -824
2. -22
3. 17.18
4. 2205
5. N, W, Z, Q, R
6. ~~N, W, Z~~, Q, R
7. $-132x + 43y$
8. $6x - 10.8y$

$$\textcircled{3} \quad w + \frac{1}{x} + \frac{1}{y} + \frac{1}{z} \quad w=17 \quad x=29$$

$$y=48 \quad z=8$$

$$(17) + \frac{1}{(29)} + \frac{1}{(48)} + \frac{1}{(8)}$$

NOTE: ^{CK} ANS WILL BE $\sim 17.$

28 places before repeating

$$29 \overline{) 0.0344827586206896551724137931 \sim .03}$$

$$\underline{87}$$

$$130$$

$$\underline{116}$$

$$140$$

$$\underline{116}$$

$$240$$

$$\underline{232}$$

$$80$$

$$\underline{58}$$

$$220$$

$$\underline{203}$$

$$170$$

$$\underline{145}$$

$$250$$

$$48 \overline{) 0.0208 \sim .02}$$

$$\underline{96}$$

$$400$$

$$\therefore 17 + .03 + .02 + .125 \Rightarrow$$

$$\begin{array}{r} .030 \\ .020 \\ .125 \\ \hline 175 \end{array}$$

$$= 17.175 \sim \boxed{17.18}$$

To nearest hundredth

① Common Denominator $\frac{17}{1} + \frac{1}{29} + \frac{1}{48} + \frac{1}{8}$

try $(29)(48) \Rightarrow$

$$\begin{array}{r} 48 \\ 29 \\ \hline 432 \\ 96 \\ \hline 1392 \end{array}$$

$\div$ rule "if last 3 digits are $\div$ by 8, so is bigger number.
Good! 8 goes into 1392

$$\begin{array}{r} 174 \\ 8 \overline{)1392} \\ \underline{8} \\ 59 \\ \underline{56} \\ 32 \end{array}$$

$$\frac{17(1392)}{1392} + \frac{48}{1392} + \frac{29}{1392} + \frac{174}{1392}$$

$$\begin{array}{r} 1392 \\ \times 17 \\ \hline 9744 \\ 1392 \\ \hline 23664 \end{array}$$

$$\frac{23664}{1392} + \frac{48}{1392} + \frac{29}{1392} + \frac{174}{1392}$$

ADD tops $\rightarrow$

$$\begin{array}{r} 23664 \\ 48 \\ 29 \\ + 174 \\ \hline 23915 \end{array}$$



$$\boxed{\frac{23915}{1392}}$$

$\sim 17.180 \checkmark$

This is why any problem should either be solved for its EXACT, algebraic answer, $\frac{23915}{1392}$ in this case, or, it should say to what decimal place to carry it out.

Ch. 1-3 Solving Equations

Follow the GRE $\Rightarrow$ Golden Rule of Equations
 "whatever you do to one side, do to the other"

Simple equations where the variable is to only the first power (EX) $3x = 9$ NOT $3x^2 = 9$

can be solved by doing "undos" until the variable is "by itself".
 $+$, $-$ undo each other
 $\cdot$, $\div$ undo each other

want by itself

(EX) $a + 4.39 = 76$

$- 4.39 \quad - 4.39$

$a = 71.61$

$\leftarrow$ UNDO $+4.39$ with -4.39
 FOLLOW GRE

CR $() + 4.39 \stackrel{?}{=} 76$

$(71.61) + 4.39 = 76 \checkmark$

(EX) $-\frac{3}{5}d = 18$

$-\frac{5}{3} \cdot -\frac{3}{5}d = \frac{6}{18} \cdot -\frac{5}{3}$

$d = -30$

CR $-\frac{3}{5}(-30) \stackrel{?}{=} 18 \checkmark$

💡 Variables on both sides $\Rightarrow$ get together before other undos

💡 Like terms on same side $\Rightarrow$ always combine first

(EX)

$$3x + 4x + 2 = x - 16$$

combine like terms

$$\begin{array}{r} \diagdown \quad \diagup \\ 7x + 2 = x - 16 \\ -x \qquad \qquad -x \end{array}$$

use UNDO'S to get variables together, follow GIRE

$$\begin{array}{r} 6x + 2 = -16 \\ -2 \qquad \qquad -2 \end{array}$$

$$\frac{6x}{6} = \frac{-18}{6}$$

$$\boxed{x = -3}$$

CK $3(-3) + 4(-3) + 2 \stackrel{?}{=} (-3) - 16$
 $-9 - 12 + 2 \stackrel{?}{=} -19 \checkmark$

Homework: WS 8-17-09 Ch. 1-3 (16 equations)