Mr. Simonds' MTH 60 class

Name Key

Directions

You may not look at your notes (or someone else's paper!) while taking this quiz. You may not use a calculator while taking this quiz.

Make sure that you write your solutions using the format discussed and illustrated during class. You should show your scratch work, but do it off to the side and box it off. Do not put any part of your actual solution in a box or circle.

1. Evaluate the expression $26-5x$ when $x=3$.

When $x=3$

$$26-5x = 26-5(3)$$
$$= 26-15$$
$$= 11$$

2. Write an expression or equation (as appropriate) that models each of the following. In each case, use x as your variable.

a. Three more than twice a number comes out to be 22.

$2x+3=22$ $\quad a=b \quad b=a$

b. the quotient of a number and 12

$$\frac{x}{12}$$

c. Half a number is the same as 6 less than the same number.

$\frac{x}{2}=x-6$ $\quad$ or $\quad \frac{1}{2}x=x-6$

3. Evaluate $2(x+y)$ when $x=\frac{1}{3}$ and $y=\frac{7}{2}$

When $x = \frac{1}{3}$ and $y = \frac{7}{2}$

$2(x+y) = 2\left(\frac{1}{3}+\frac{7}{2}\right)$

$= 2\left(\frac{2}{6}+\frac{21}{6}\right)$

$= 2\left(\frac{23}{6}\right)$

$= 23/3 = 7\ 2/3$

$\frac{1}{2}\cdot\frac{23}{6_3} = \frac{23}{3}$

4. Write $12\frac{4}{5}$ as an improper fraction and then write $\frac{101}{7}$ as a mixed number.

$12\ 4/5 = \frac{64}{5}$

$\frac{101}{7} = 14\ 3/7$

$12\ 4/5 = \frac{12(5)+4}{5}$

$= \frac{64}{5}$

$12 \times 5 = 60$

$60 + 4 = 64$

$7\overline{)101}$ 14 R 3

10

$3\ 1$

$2\ 8$

3

5. For each of the following numbers, **indicate the *first* set in the list** to which the number belongs. You may simply write the appropriate letter in the provided blank.

d	$6.24\overline{24}$
d	$-4\frac{4}{5}$
e	$6\sqrt{7}$
a	29

The list

a. the natural numbers

b. the whole numbers

c. the integers

d. the rational numbers

e. the irrational numbers

f. the real numbers

g. none of the above