6-24
-14

Scroll down FOR complete SOLUTIONS.

Real Quiz 1 SU14 MATH 65-083 CRN: 10113; **DO PROBLEMS 1 TO 12 IN CLASS; THE *REST ARE TAKE HOME* (13 TO 24). Write on white pages with this test sheet. Turn in your written work only on white sheets; SEPARATE papers and take test sheet home and do the Take Home Part BELOW.**
The first 4 problems are from sec. 1.1.
1. Evaluate $(p + q)/q$ for $p = 0$ and $q = 3$.
2. If $b = 6$ ft and $h = 8$ ft for a rectangle, what is the area?
3. Translate the following to mathematics, the international language of the world ! 6 MORE than the product of two numbers is 67.5.
4. Translate the following equation into mathematics. When 42 is SUBTRACTED from a number, the result is 2314. For extra credit, solve.
The next 3 problems are from 1.2
5. Factor: $10 + 10x + 30y + 30z$
6. Factor: $60a + 120b$
7. Multiply: $(3x + y + 12)6$
8. SEC. 1.3. Find the prime factorization of 2500.
9. SEC. 1.3. Perform the indicated operation: ADD. $1/2 + 3/4$
10. SEC. 1.3. Divide and simplify if possible: $(2/3) \div (7/10)$. This means 2/3 divided by 7/10.
11. SEC. 1.5. Add. $111 + (-136) + 22$
12. SEC. 1.6. Subtract: $2 - (-100) - (-3)$
QUIZ 1 MATH 65 SECTION 083 SU14 - TAKE HOME SECTION - #13 TO #24 ARE DUE MONDAY.
13. SEC. 1.3. Simplify <u>fully</u> 210/98, by reducing to lowest terms.
14. SECTION 1.4 : **(a) Is this sentence TRUE OR FALSE? $-1000 < -999$. Write TRUE OR FALSE.** **(b) Find the absolute value: $\lvert x \rvert$, for $x = -67.2$** **(c) Is this sentence TRUE OR FALSE? $\lvert -1000 \rvert < 124{,}564$. Write TRUE OR FALSE.** **(d) List in order from least to greatest, from left to right.** **13, -12.5, -17, -123, 123, -122.5, 14, -2, 0, $\sqrt{5}$**

15. SEC. 1.5. Add. 36 + (-14) + (-19) + (-6) + 1 + (-1) + 2 + (-2) + 36.
The next probs. are from sec 1.6
16. Find the opposite of 89.1
17. Subtract: 6 - (-14)
18. Subtract: -15 - (-14)
19. Subtract: 2 - (-100)
20. Subtract: 2 - 100
21. Combine like terms: -2 - 6t + 10 + 2t + 5 - 7t
22. Combine like terms: -5y - (-3x) + 9x - (- 1) - 2y - (- 9)
23. Combine like terms: 5y - (-4x) + 8x - (- 5) - 3y - 7 + 3x
24. (a) Find -(-x) when x = -3. (b) Find -(-(-x)) when x = -4. (c) Find - (-(-(-x))) when x = 7.

Quiz 1 Solutions

1. $(p+q)$ $p=0$
$\frac{}{z}$; $q=3$

$\frac{0+3}{3} = \frac{3}{3} = 1$

2. $(6ft)(8ft)$
$= 48ft^2$

3. $6 + ab = 67.5$

4. $x - 42 = 2314$
$+42 \quad +42$
$x = 2356$

5. $10 + 10x + 30y + 30z$
$= 10(1 + x + 3y + 3z)$

6. $60a + 120b$
$60 = G.C.F.$
$60 \cdot 1 \cdot a + 60 \cdot 2 \cdot b$
$= 60 \cdot (1 \cdot a + 2 \cdot b)$
$= 60(a + 2b)$

7. $(3x + y + 12) \cdot 6$
$= 18x + 6y + 72$

8. 2500
$= 100 \cdot 25$
$= 10 \cdot 10 \cdot 25$
$= 2 \cdot 5 \cdot 2 \cdot 5 \cdot 5 \cdot 5$

9. $\frac{1}{2} + \frac{3}{4}$
$= \frac{1}{2} \cdot \frac{2}{2} + \frac{3}{4} \cdot \frac{1}{1} = \frac{2+3}{4}$
$= \frac{5}{4}$

Quiz 1 Solutions

(10.) $\frac{2}{3} \div \frac{7}{10} = \frac{2}{3} \cdot \frac{10}{7}$

$= \frac{20}{21}$

(11.) $111 + (-136) + 22$

$= 133 + (-136)$

$= -(136 - 133) = \boxed{-3}$

(12.) $2 - (-100) - (-3)$

$= 2 + 100 + 3 = \boxed{105}$

(13.) $\frac{210}{98} = \frac{2 \cdot 3 \cdot 5 \cdot 7}{2 \cdot 7 \cdot 7} = \frac{15}{7}$

(14.)

(a.) $-1000 < -999$ (TRUE)

(b.) $|-67.2| = 67.2$

(c.) $|-1000| < 124,564$

TRUE.

(14.) (d.)

$-123, -122.5, -17,$

$-12.5, -2, 0, \sqrt{5},$

$13, 14, 123.$

(13.) PRACTICE:

$\frac{210}{98} = \frac{2 \cdot 105}{2 \cdot 49}$

$= \frac{2 \cdot 3 \cdot 35}{2 \cdot 7 \cdot 7}$

$= \frac{2 \cdot 3 \cdot 7 \cdot 5}{2 \cdot 7 \cdot 7} = \frac{15}{7}$

(15.)

$36 + (-14) + (-19) + (-6)$

$+ (1) + (-1) + 2 + (-2) + 36$

$= 36 + (-42) + (1) + 2 + 36$

$= 75 + (-42)$

$= +(75 - 42)$

$= +(33) = \boxed{33}$

(16.) -89.1

(17.) $6-(-14)$

$=6+14$

$=20$

(18.) $-15-(-14)$

$=-15+14$

$=-(15-14)$

$=-(1)$

$=-1$

(19.) $2-(-100)$

$=2+100$

$=102$

(20.)

$2-100$

$=-(100-2)$

$=-98$

(12.) PRACTICE - CHANGE signs.

$2-(-100)-(-3)$

$=2+100+3$

$=105$

(21.) $-2-6c+10+2c-5-7c$

$=-11c-2+10-5$

$=\boxed{-11c+3}$

(22.)

$-5y-(-3x)+9x-(-1)-2y-(-9)$

$=-5y+3x+9x+1+(-2y)+9$

$=-7y+12x+10$

$=12x-7y+10$

(23.)

$5y - (-4x) + 8x - (-5) - 3y - 7 + 3x$

$= 5y + 4x + 8x + 5 + (-3y) + (-7) + (3x)$

$= 2y + 15x + (-2)$

$= 15x + 2y - 2$

(24) (a) $-(-x)$; $x = -3$

change sign TWICE:

$-(-x) = -3$

(b) $-(-(-x))$; $x = -4$

change sign 3 times:

$-(-(-x)) = 4$

(c) $-(-(-(-x))) = 7$ since we changed signs 4 times.