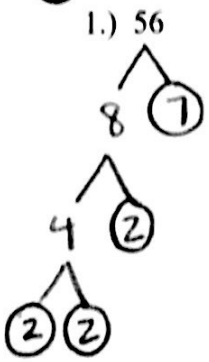
Test Review Worksheet

Name: KEY

Find the prime factorization of the number. If it is a prime number, write *prime*.

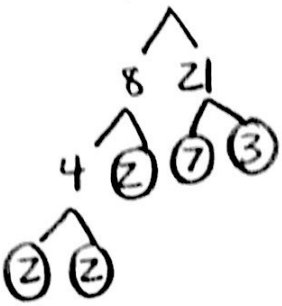
1.) 56



$2 \times 2 \times 2 \times 7$

$2^3 \times 7$

2.) 168



$2 \times 2 \times 2 \times 3 \times 7$

$2^3 \times 3 \times 7$

Find the <u>greatest common factor (GCF)</u> of the pair of numbers.

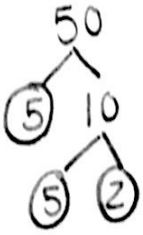
3.) 66, 130

$2 \times 3 \times 11$

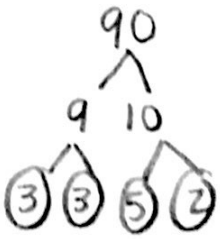
$2 \times 5 \times 13$

GCF: 2

4.) 50, 90



$2 \times 5 \times 5$



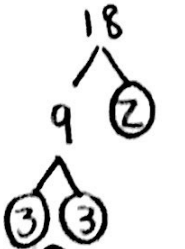
$2 \times 3 \times 3 \times 5$

GCF: 2×5

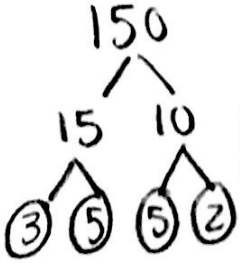
GCF = 10

Find the <u>least common multiple (LCM)</u> of the pair of numbers.

5.) 18, 150



$2 \times 3 \times 3$



$2 \times 3 \times 5 \times 5$

LCM: $2 \times 3 \times 3 \times 5 \times 5$

LCM = 450

6.) 5, 15

LCM: 5×3

LCM = 15

Add, subtract multiply, or divide and SIMPLIFY. Write the answer as a fraction or a mixed number.

7.) $5\frac{1}{2} - \frac{1}{8}$

$\frac{11}{2} - \frac{1}{8}$

$\frac{44}{8} - \frac{1}{8}$

$= \frac{43}{8}$

$= \boxed{5\frac{3}{8}}$

8.) $\frac{11}{15} \times \frac{3}{8}$

$\frac{11 \times 3}{15 \times 8}$

$= \frac{33}{120}$

$= \boxed{\frac{11}{40}}$

9.) $2\frac{1}{4} \div 1\frac{1}{3}$

$\frac{9}{4} \div \frac{4}{3}$

$\frac{9}{4} \times \frac{3}{4}$

$= \frac{27}{16}$

$= \boxed{1\frac{11}{16}}$

10.) $\frac{7}{10} + \frac{1}{8}$ (4, 5; 4, 5)

$\frac{28}{40} + \frac{5}{40}$

$= \boxed{\frac{33}{40}}$

11.) $1\frac{3}{7} + \frac{1}{2}$

$\frac{10}{7} + \frac{1}{2}$

$\frac{20}{14} + \frac{7}{14}$

$= \frac{27}{14}$

$= \boxed{1\frac{13}{14}}$

12.) $8\frac{1}{2} \times \frac{1}{4}$

$\frac{17}{2} \times \frac{1}{4}$

$= \frac{17}{8}$

$= \boxed{2\frac{1}{8}}$

13.) $\frac{4}{5} \div \frac{1}{2}$

$\frac{4}{5} \times \frac{2}{1}$

$= \frac{8}{5}$

$= \boxed{1\frac{3}{5}}$

14.) $\frac{3}{4} - \frac{3}{7}$ (7, 4; 7, 4)

$\frac{21}{28} - \frac{12}{28}$

$= \boxed{\frac{9}{28}}$

ve the following equations. Express your answer as a fraction or mixed number in SIMPLEST ORM. For number , express your answer as a decimal rounded to the nearest hundredth.

15.) $24 - 6r = 6(4 - r)$

$24 - 6r = 24 - 6r$

$+6r \quad +6r$

$24 = 24$

identity

16.) $2(8 - 4y) = \frac{1}{3}(33 - 18y) + 3$

$16 - 8y = 11 - 6y + 3$

$16 - 8y = 14 - 6y$

$+8y \quad +8y$

$16 = 14 + 2y$

$-14 \quad -14$

$\frac{2}{2} = \frac{2y}{2}$

$1 = y$

17.) $8(x + 4) = 7(x + 8)$

$8x + 32 = 7x + 56$

$-7x \quad -7x$

$x + 32 = 56$

$-32 \quad -32$

$x = 24$

18.) $6m - 5 = 7m + 7 - m$

$6m - 5 = 6m + 7$

$-6m \quad -6m$

$-5 \neq 7$

no solution

19.) $12.67 + 42.35x = 5.34x$

$-42.35x \quad -42.35x$

$\frac{12.67}{-37.01} = \frac{-37.01x}{-37.01}$

$-0.34 = x$

20.) $4t + 3(t - 2) = -5(t - 4) - t$

$4t + 3t - 6 = -5t + 20 - t$

$7t - 6 = -6t + 20$

$+6t \quad +6t$

$13t - 6 = 20$

$+6 \quad +6$

$\frac{13t}{13} = \frac{26}{13}$

$t = 13$

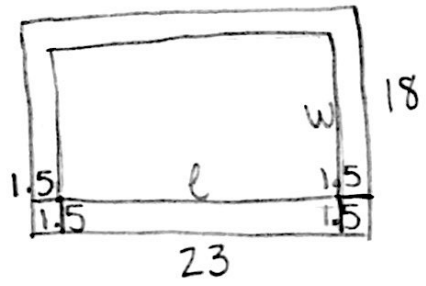
Solve the following problem by reading carefully and completing each step.

21.) A farmer is buidling a new fence for his piggys. The boards that are each 1.5 foot thick frame the pigpen. The outside of the frame is 23 feet long and 18 feet wide. The farmer needs to find the perimer of the fence to help determine how many boards will be needed to fence all the piggys. Find the perimeter of the pigpen.

a.) Define your variable(s).

x = perimeter of the pigpen
ℓ = length of pigpen
w = width of pigpen

b.) Draw a picture.



$\ell = 23 - 1.5 - 1.5 = 20$

$w = 18 - 1.5 - 1.5 = 15$

c.) Write and equation.

$x = \ell + w + \ell + w$

$x = 2\ell + 2w$

d.) Solve your equation.

$x = 2(20) + 2(15)$

$x = 40 + 30$

$\boxed{x = 70}$

e.) What is the perimeter of the farmer's pigpen?

$\boxed{70 \text{ feet}}$