STUDENTS ENTERING MATH 1

Shepherd Middle School

Summer Packet Math 1 Answer Key

Ratios GRP

Find the prime factorization of each number.

1) 27 — $3 \cdot 3 \cdot 3$

2) 114 — $2 \cdot 3 \cdot 19$

Find the GCF of each set of numbers.

3) 12 and 42 — 6

4) 16 and 25 — 1

Find the LCM of each set of numbers.

5) 5 and 10 — 10

6) 8 and 36 — 72

Circle whether it is even or odd. Then, tell whether each number is divisible by 2,3,4,5,6,9, or 10.

7) 78

Circle one: (Even) or Odd

Write yes or no in each space.

2	yes	3	yes	4	no	5	no
6	yes	9	no	10	no		

8) 8,505

Circle one: Even or (Odd)

Write yes or no in each space:

2 no 3 yes 4 no 5 yes

6 no 9 yes 10 no

Write each ratio/rate in simplest form. Don't forget to LABEL!!

9) A class has 5 boys and 15 girls. What is the ratio of boys to girls? 1 boy / 3 girls

$\frac{b}{g} = \frac{5}{15} = \frac{1}{3}$

10) An animal shelter has 36 kittens and 12 puppies available for adoption. What is the ratio of kittens to puppies? 3 kittens / 1 puppy

Write each rate as a UNIT RATE in simplest form. Don't forget to LABEL!!

11) David printed 24 photos in 8 minutes. How many photos did he print per minute? 8 photos / minute

12) Vinny decorated 72 cookies in 36 minutes. How many cookies did he decorate per minute? 2 cookies / minute

13) Amy is training for a half marathon. In practice, she runs 2 miles in 15 minutes. If she continues at the same rate, how many miles will she run in an hour?

8 miles in an hr

Miles	2	4	8
Minutes	15	30	60

Number System 6NS

Add or Subtract. Show ALL work!!

14) 112.45 + 6.3

112.45
+6.30

118.75

15) 10 - 3.2

10.6
-3.2

6.8

Multiply. Show ALL Work!!

16) 63.4 x 9

63.4
x 9

570.6

17) 3.7 x 2.1

3.7
x 2.1

7.77

Divide. Round to the nearest TENTH if necessary!! Show ALL work!!

18) $44.69 \div 2$ $2\overline{)44.69}$ 22.32

19) $2.102 \div 0.4$ $0.4\overline{)2.102}$ 5.255

Order the following from least to greatest:

20) 0.4, 5/8, 38%, 0.5 38%, 0.4, 0.5, 5/8

$5\overline{)5.} = 0.625$

Find the percent of each number.

21) 6% of 95 $0.06(95)$ $\frac{6}{100} \cdot \frac{95}{1}$ 5.7

22) 15% of 115 $0.15(115)$ $\frac{15}{100} \cdot \frac{115}{1}$ 17.25

Solve the following percent problems with a proportion:

23) 140 is 70% of what number? $\frac{70}{100} = \frac{140}{n}$ $\frac{100(140)}{70}$ 200

24) 240 is 60% of what number? $\frac{60}{100} = \frac{240}{n}$ $\frac{100(240)}{60}$ 400

Order the integers from greatest to least.

33) (5, -5, -11, 13)

13, 5, -5, -11

34) (-8, 25, 32, -16)

32, 25, -8, -16

Equations 6E6

Directions: Show all your work and your check!

35) $x + 7.2 = 10.8$

$-7.2 \quad -7.2$

$x = 3.6$

✓ $3.6 + 7.2 = 10.5$

36) $y - 12 = 24$

$+12 \quad +12$

$y = 36$

✓ $36 - 12 = 24$

37) $\frac{c}{8} = 32$

$c = 4$

✓ $8(4) = 32$

Statistics 6SP

38) Tina babysat eight times. She earned $15, $20, $10, $12, $20, $16, $30, and $18. What is the average amount of money she made?

$23.88

$\text{sum} = \frac{191}{8} = 23.875$

39) Tommy recorded her test scores in the table. Find the median and the mode.

med: 89
mode: none

Test scores
93
89
88
94
68

middle — most often

68, 88, 89, 93, 94

Geometry (40)

Please find the area of each figure. Be sure to show ALL work and label!

40)

68.74 m^2

$b \times h$

$10.2(8.7)$

41)

6.9 cm^2

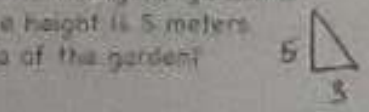
$\frac{b \times h}{2}$

$\frac{2.3(6)}{2}$

10 yd

$\frac{30(10)}{2}$

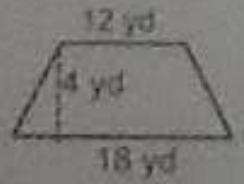
43) The base of the triangular garden is 3 meters and the height is 5 meters. What is the area of the garden?



$75\ m^2$

44)

$60\ yd^2$

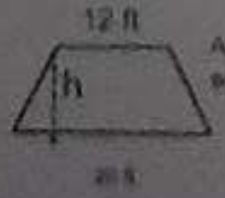


$\frac{(b+b)h}{2}$

$\frac{(12+18)4}{2}$

45) Find the height

5 ft



Area = 80 sq ft

$\frac{(12+20)h}{2} = 80$

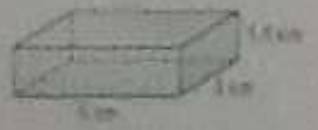
$\frac{32h}{2} = 80$

$16h = 80$

46) 56 mm³

b x h x ℓ
10 x 4 x 1.4

47) 22.5 cm³



5 · 3 (1.5)

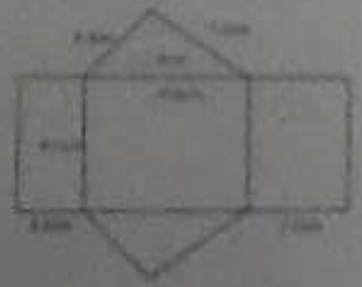
48) Find the height of the rectangular prism if the length is 5cm, the width is 3cm, and the volume is 37.5cm³

2.5 cm

5 · 3 · h = 37.5
15 h = 37.5

Name each 3-D Figure. Find the surface area of each figure.

49) triangular prism 208.67 cm²



$\frac{b \times h}{2}$ $\frac{9 \times 4}{2}$ = 18cm² x 2 = 36cm²

b x h 8.1(4.5) = 36.45cm²

b x h 8.1(9.0) = 72.9cm²

b x h 8.1(7.2) = 58.32cm²

sum of all sides

Have a great summer!!!