



Workout 2

51. _____ % The city whose full name is El Pueblo de Nuestra Señora la Reina de Los Ángeles del Río de Porciúncula, which contains 61 letters, is typically abbreviated to Los Angeles. In terms of number of letters, what percent of the full name is the abbreviated name? Express your answer to the nearest hundredth.

$$\frac{10}{61} = 16.39\%$$

52. _____ ft John is biking at a rate of 15 mi/h. There are 5280 ft in 1 mi. On average, how many feet does John travel in 1 minute?

$$15 \times 5280 = 79200 \text{ ft}$$

$$\frac{79200}{60} = 1320 \text{ ft}$$

53. _____ coins Malcolm gives a cashier two one-dollar bills to pay for a \$1.64 purchase. What is the least number of coins that Malcolm could receive as correct change?

$$\begin{array}{r} 2.00 \\ - 1.64 \\ \hline .36 \end{array}$$

1-25 quarter
1-10 dime
1-1 penny

3 coins

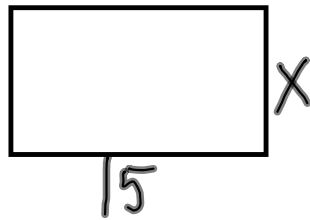
54. _____ A fair eight-sided die with faces numbered 1 through 8 is rolled four times. What is the probability that exactly one 3 is rolled, and that the 3 is rolled on the third roll? Express your answer as a common fraction.



$$\frac{7}{8} \cdot \frac{7}{8} \cdot \frac{1}{8} \cdot \frac{7}{8}$$

$$\frac{343}{4096}$$

55. _____ ft The Livingstons' rectangular living room is 15 ft long and has an area of 195 ft². What is the width of the living room?

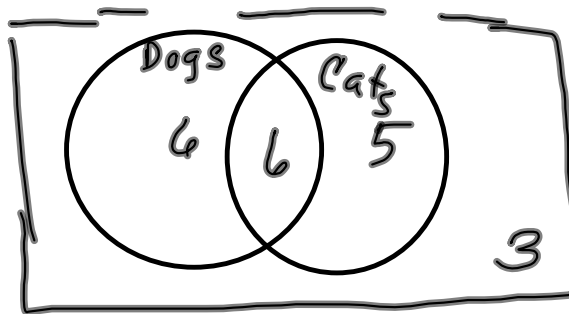


$$\begin{aligned}
 l w &= A \\
 15 x &= 195 \\
 \frac{15}{15} & \quad \frac{195}{15} \\
 x &= 13 \text{ ft}
 \end{aligned}$$

56. _____ students

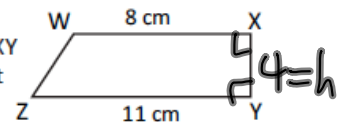
I own a
<input type="checkbox"/> cat
<input type="checkbox"/> dog

According to a survey of Ms. Jones' pre-algebra class, 11 students own a cat, 12 students own a dog, 6 students own both a cat and a dog and 3 students own neither. What is the number of students in Ms. Jones' pre-algebra class?



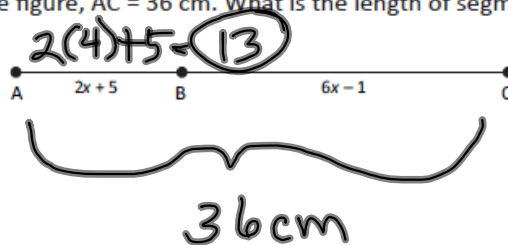
$$\begin{array}{r}
 6 \\
 6 \\
 5 \\
 3 \\
 \hline
 20 \text{ students}
 \end{array}$$

57. _____ cm² In trapezoid WXYZ, shown here, WX = 8 cm and ZY = 11 cm. Segment XY is half as long as the shorter base, and ∠WXY and ∠XYZ are each right angles. What is the area of trapezoid WXYZ?



$$\begin{aligned}
 A &= \frac{1}{2} (b_1 + b_2) h \\
 &= \frac{1}{2} (11 + 8) (4) \\
 &= 2 (19) \\
 &= 38
 \end{aligned}$$

58. _____ cm In the figure, AC = 36 cm. What is the length of segment AB?



$$\begin{aligned}
 (2x+5) + (6x-1) &= 36 \\
 8x + 4 &= 36 \\
 8x &= 32 \\
 \frac{8x}{8} &= \frac{32}{8} \\
 x &= 4
 \end{aligned}$$

59. _____ If two numbers are chosen randomly, with replacement, from the set of the first five counting numbers, what is the probability that the sum of the two numbers will be 3? Express your answer as a common fraction.

$$\frac{2}{5} \cdot \frac{1}{5} = \frac{2}{25}$$

60. 5 _____ At a market, a customer who purchases 3 lb of potato salad and 4 lb of coleslaw pays a total of \$10.75. Another customer pays a total of \$4.75 to buy 1 lb of potato salad and 2 lb of coleslaw. What is the cost to purchase 2 lb of potato salad and 3 lb of coleslaw?

$$\begin{array}{r} 3ps + 4cs = 10.75 \\ - (1ps + 2cs = 4.75) \\ \hline 2ps + 2cs = 6 \\ - (1ps + 2cs = 4.75) \\ \hline 1ps = \$1.25 \end{array}$$

$$\begin{array}{r} \text{so } 1.25 + 2cs = 4.75 \\ - \qquad \qquad 2cs = 3.50 \\ \qquad \qquad \qquad 1cs = 1.75 \end{array}$$

$$\begin{array}{r} \text{so } 2ps + 3cs \\ - 2(1.25) + 3(1.75) \\ \qquad 2.50 + 5.25 = \$7.75 \end{array}$$