

Academir Middle School 7th Grade Summer Mathematics Packets

Students Should print out their packets, work on them during the summer, and be prepared to turn them in on August 22nd, 2016. Please ensure that “you show all your work”.

Name: _____ Date: _____

7th Grade-Summer Packet-Mathematics 2016

Question 1 of 38

Robby only wears yellow & orange shirts. The ratio of yellow & orange shirts in his closet is 4:3.

If Robby has 9 orange shirts, how many yellow ones does he have?

- A. 3 yellow shirts
- B. 4 yellow shirts
- C. 9 yellow shirts
- D. 12 yellow shirts

Question 2 of 38

Leo has done a number of experiments, and has developed a theory. Based upon the evidence, he has come to the conclusion that if he rolls a regular number die, 50% of the time the number rolled will be odd.

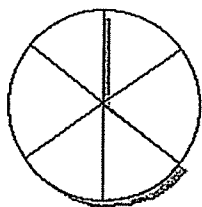
How can he evaluate this theory for accuracy?

- A. He should continue to enact experiments, they will prove his theory true eventually.
- B. He should use ratios and proportion to prove his theory is correct.
- C. He should continue to enact experiments, they will eventually prove his theory incorrect..
- D. He should use ratios and proportion to prove his theory is incorrect.

Question 3 of 38

The ratio of the shaded sections to unshaded sections is 4 to 2.

Which of the options below names three ratios that are the same as 4 to 2?



- A. 10:5; 8:4; 15:3
- B. 9:3; 12:1; 18:6
- C. 2:1; 8:4; 12:6
- D. 1:8; 2:6; 4:7

Question 4 of 38

Fuel efficiency is calculated in the number of miles driven per gallon of gas.

The measurement of miles per gallon is an example of _____.

- A. mode
- B. ratio
- C. range
- D. rate

Question 5 of 38

A yard of ribbon costs \$6.99.

How much will 2 feet cost?

1 yard = 3 feet

- A. \$20.97
- B. \$6.99
- C. \$4.66
- D. \$2.33

Question 6 of 38

Abby's fitness plan recommends that she jog 16 miles a week. She jogs a mile in 7 minutes and 30 seconds.

Which statement best describes the amount of time Abby will spend jogging if she follows her fitness plan?

- A. Abby will be tired if she follows the plan.
- B. Abby will jog 120 minutes a week.
- C. Abby will jog 112 minutes a week.
- D. Abby will jog at least 3 hours a week.

Question 7 of 38

Ashley told her father she could compute how long the trip to her grandparents would take using this formula: Total Distance \div X = Total Time. What does X stand for in the formula?

- A. speed limit
- B. miles per gallon
- C. number of drivers
- D. miles per hour

Question 8 of 38

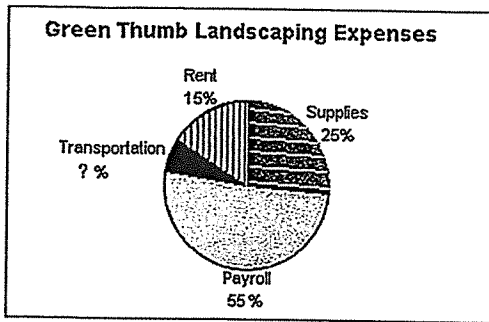
Trevor mows lawns in the summer for extra money. He can mow an 400 square foot lawn in one hour and 15 minutes.

How many lawns of the same size can he mow in $7\frac{1}{2}$ hours?

- A. $6\frac{1}{2}$
- B. 6
- C. $5\frac{1}{2}$
- D. 5

Question 9 of 38

The following graph is an expense chart for Green Thumb Landscaping.

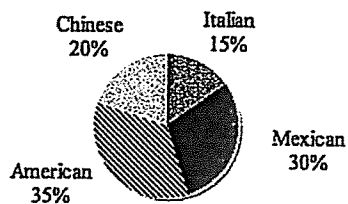


What percent of expenses goes towards transportation?

- A. 5%
- B. 7%
- C. 10%
- D. 15%

Question 10 of 38

Food Preferences in Mr. Wilson's Class

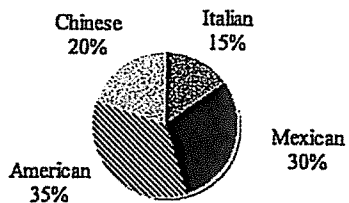


About how many students in Mr. Wilson's class preferred American food?

- A. about 12 students
- B. about 11 students
- C. about 10 students
- D. about 9 students

Question 11 of 38

Food Preferences in Mr. Wilson's Class

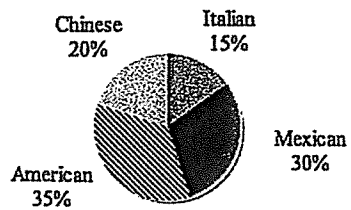


About how many students in Mr. Wilson's class preferred Italian food?

- A. about 5 students
- B. about 7 students
- C. about 16 students
- D. about 28 students

Question 12 of 38

Food Preferences in Mr. Wilson's Class



Of the 30 students in Mr. Wilson's class, how many students preferred Italian or Chinese food?

- A. about 30 students
- B. about 18 students
- C. about 11 students
- D. about 5 students

Question 13 of 38

Mary is making flags for her music club. She buys $51\frac{1}{2}$ yards of fabric. Each flag requires $4\frac{5}{8}$ yards of fabric. Approximately, how many flags can she make?

- A. 7
- B. 8
- C. 10
- D. 11

Question 14 of 38

Solve.

$$\frac{12}{13} \div \frac{4}{5}$$

- A. $\frac{2}{5}$
- B. $\frac{16}{25}$
- C. 1
- D. $1\frac{1}{5}$

Question 15 of 38

Solve.

$$4\frac{2}{5} \div 2\frac{1}{8}$$

- A. $1\frac{2}{65}$
- B. $2\frac{6}{85}$
- C. $5\frac{4}{5}$
- D. $9\frac{7}{20}$

Question 16 of 38
Solve.

$$\frac{11}{30} \div \frac{12}{15} = \underline{\hspace{2cm}}$$

- A. $\frac{11}{120}$
- B. $\frac{11}{40}$
- C. $\frac{11}{12}$
- D. $\frac{33}{10}$

Question 17 of 38
Solve.

$$\frac{1}{2} \div \frac{1}{2} = ?$$

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. 1
- D. 2

Question 18 of 38

Which set of numbers has a median of 6?

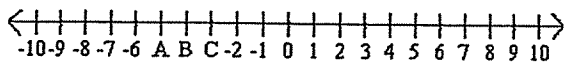
- A. 3, 2, 6
- B. 9, 2, 1
- C. 4, 1, 4
- D. 3, 9, 6

Question 19 of 38

The record low temperature recorded at Mayfield Middle School was 8° below zero. Which of the following represents this temperature?

- A. -8°
- B. 8°
- C. $|8|^\circ$
- D. $|-8|^\circ$

Question 20 of 38

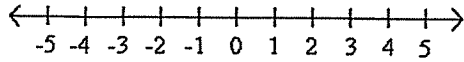


What are the values of A, B, and C?

- A. -5, -4, and -3
- B. -3, -4, and -5
- C. 3, 4, and 5
- D. 5, 4, and 3

Question 21 of 38

Use the number line to solve the number sentence.



$$3 - 7 =$$

- A. 5
- B. 4
- C. 0
- D. -4

Question 22 of 38

On a number line, which of the following numbers would be found furthest to the left?

$$123\%, -2.78, \frac{8}{25}, -45\%, -0.97$$

- A. 123%
- B. -0.97
- C. -2.78
- D. -0.45

Question 23 of 38

Place the following numbers in order from greatest to least.

$$-0.98, \frac{8}{5}, 6.43, 17\%, -13.04\%, \frac{11}{14}$$

- A. $\frac{11}{14}, -0.98, \frac{8}{5}, 6.43, 17\%, -13.04\%$
- B. $-0.98, \frac{8}{5}, 6.43, 17\%, -13.04\%, \frac{11}{14}$
- C. $-0.98, -13.04\%, 17\%, \frac{11}{14}, \frac{8}{5}, 6.43$
- D. $6.43, \frac{8}{5}, \frac{11}{14}, 17\%, -13.04\%, -0.98$

Question 24 of 38

The football team is having a fundraiser to buy new uniforms. Football bumper stickers cost the football team \$2.00 each. The football team sells them for \$4.75.

Which equation shows the number of bumper stickers (S) that must be sold for the football team to make a profit of \$137.50?

- A. $S = \$137.50 \div \2.75
- B. $S = \$4.75 - \2.00
- C. $S = \$137.50 + \2.00
- D. $S = \$137.50 + \$4.75 - \$2.00$

Question 25 of 38

Carlos runs 6 laps around the track on Monday, Tuesday, Wednesday, and Thursday. On Friday he runs 8 laps. Which expression shows how many laps Carlos ran in 5 days?

- A. $(6 + 4) \times 8$
- B. $(6 \times 8) + 5$
- C. $(6 + 5) \times 8$
- D. $(6 \times 4) + 8$

Question 26 of 38

Solve for x .

$$6x + 2 = 20$$

- A. $x = 5$
- B. $x = 4$
- C. $x = 3$
- D. $x = 2$

Question 27 of 38

If $75 - n = 23$, what is $n + 19 - 8$?

- A. 52
- B. 63
- C. 72
- D. 81

Question 28 of 38

If $y = 3x + 1$, and $x = 4$, solve for y .

- A. 8
- B. 11
- C. 13
- D. 35

Question 29 of 38

Ken is placing hardwood floors in his kitchen. His kitchen is a perfect rectangle with dimensions being 25 feet by 15 feet. Ken needs to know the area so he knows how much flooring to buy.

What is the area of Ken's kitchen?

- A. 80 ft^2
- B. 375 ft^2
- C. $5,215 \text{ ft}^2$
- D. $140,625 \text{ ft}^2$

Question 30 of 38

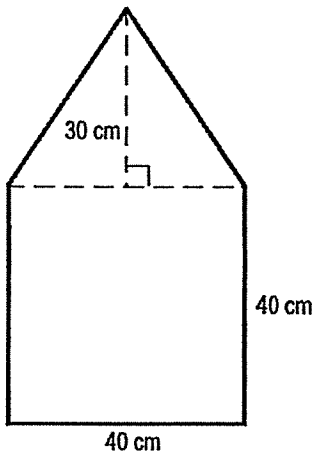
Rom's parents are helping him plant a small vegetable garden for his 4-H project. They plan to cover the area Rom is going to use with black plastic.

If the area Rom is going to use measures 12 ft by 8 ft, how much plastic will they need?

- A. 96 sq. ft.
- B. 88 sq. ft.
- C. 40 sq. ft.
- D. 32 sq. ft.

Question 31 of 38

Find the area of the shape below.



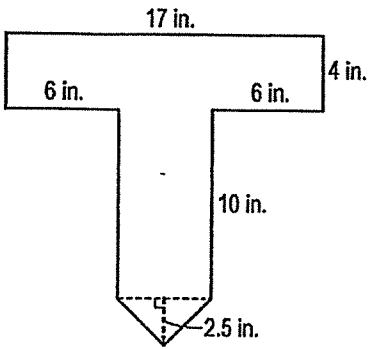
$$\text{Area of a triangle} = \frac{1}{2}bh$$

$$\text{Area of a square} = s^2$$

- A. 3,700 cm²
- B. 2,800 cm²
- C. 2,200 cm²
- D. 1,400 cm²

Question 32 of 38

Find the area of the shape below.

Area of a rectangle = $length \times width$ Area of a triangle = $\frac{1}{2}bh$

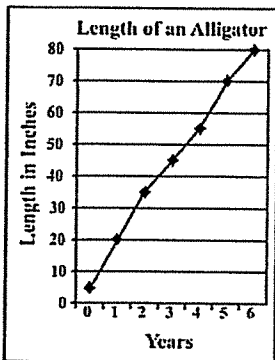
- A. 108 cm^2
- B. 118 cm^2
- C. 124.25 cm^2
- D. 174.5 cm^2

Question 33 of 38

A rectangular prism has a base that is 4.8 cm long and 3.5 cm wide. The prism has a height of 6.2 cm. Estimate the volume of the prism by rounding each length to the nearest cm before multiplying.

- A. 72 cubic cm
- B. 90 cubic cm
- C. 120 cubic cm
- D. 140 cubic cm

Question 34 of 38

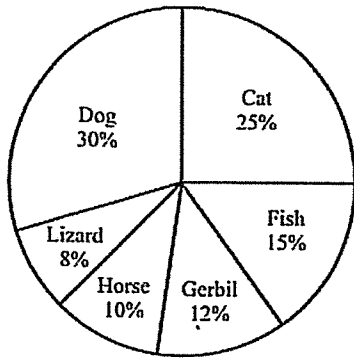


If the alligator is 55 inches long how old is the alligator?

- A. 3
- B. 4
- C. 5
- D. 6

Question 35 of 38

A group of students was asked to choose their favorite pet.



How many students chose fish and gerbils as their favorite pets?

- A. 25%
- B. 55%
- C. 27%
- D. 12%

Question 36 of 38

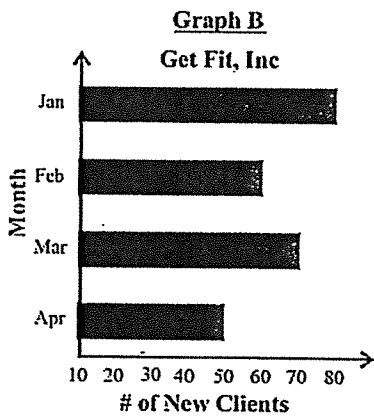
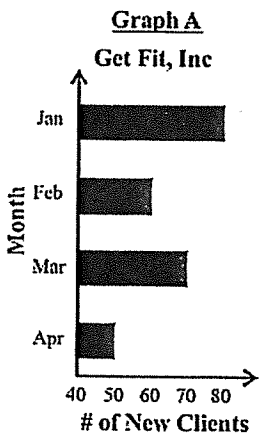
Mr. Carter's 6th grade classes are conducting a survey on how many West Middle School students watch *Animal Planet*.

Which is the best group for the classes to sample?

- A. Randomly survey 45 male students.
- B. Randomly survey only people whose favorite subject is science.
- C. Randomly survey 45 students in middle school.
- D. Randomly survey students who have a grade of A in science.

Question 37 of 38

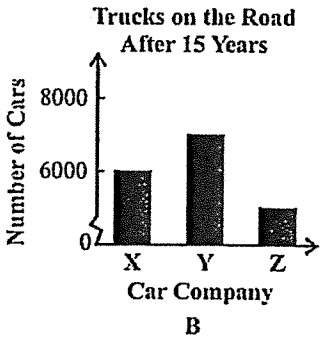
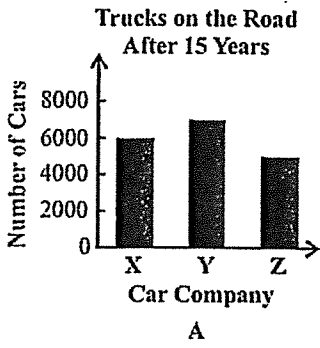
How is Graph A different from Graph B?



- A. The vertical scale distorts the lengths of the bars on the graphs.
- B. The horizontal scale distorts the lengths of the bars on the graphs.
- C. The vertical axis shows a gap in the scale.
- D. The data along the horizontal axes are not the same distance apart.

Question 38 of 38

How is Graph B different from Graph A?



- A. The vertical axis is broken on Graph B.
- B. The bars do not show the same data.
- C. The horizontal axes are different.
- D. The graphs are exactly alike.