

Stage I Question Set 2

- 1) 20 questions
- 2) Completion time 30 to 40 minutes
- 3) Calculators are permitted
- 4) No penalty for incorrect answers
- 5) Diagrams are not drawn to scale

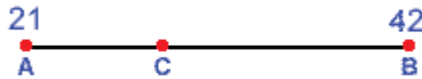
QUESTION #1:

What is the smallest number in this set?

- (a) 2.02 (b) 2.002 (c) $2 \div 0.2$ (d) 2.00022 (e) 2.01

QUESTION #2:

C is a point $\frac{1}{3}$ of the way between A and B. Find the number located at C.

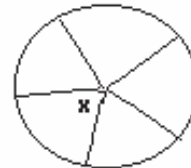


- (a) 25 (b) 35 (c) 28 (d) 42 (e) none of the above

QUESTION #3:

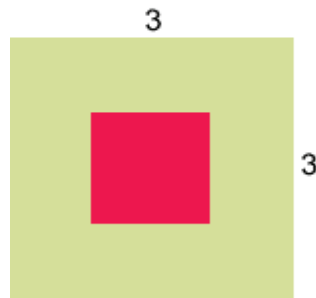
The circle shown is divided into 5 equal regions. What is the value of the angle x in degrees?

- (a) 120 (b) 144 (c) 96 (d) 72 (e) none of the above



QUESTION #4:

Drew wants to place a picture in the exact center of his bedroom wall. The picture is 100 cm x 100 cm. His wall is 3 m x 3 m. How high will the top surface of the picture be from the floor?



- (a) 2 m (b) 1.5 m (c) 3 m (d) 1 m (e) none of the above

QUESTION #5:

The number b is halfway between a and c . $a + c = 526$. What does b equal?

- (a) 263 (b) 132 (c) 236 (d) 526 (e) none of the above

QUESTION #6:

What is the approximate measure, in degrees, of the angle of the clock hands when the time is 3:00?

- (a) 90 (b) 180 (c) 360 (d) 45 (e) none of the above

QUESTION #7:

Laura got a math test score (out of 100) which was 22 points higher than the average. Bill had a test score which was $\frac{4}{3}$ of the average, and 2 points lower than Laura's. What was the class average on this test?

- (a) 72 (b) 60 (c) 82 (d) 80 (e) none of the above

QUESTION #8:

Express as a decimal fraction: $2\frac{1}{10} + \frac{1}{5} + 1\frac{1}{20}$

- (a) 3.35 (b) 3.3 (c) 3.5 (d) 2.25 (e) none of the above

QUESTION #9:

A semicircular pane of glass is divided into 4 equal regions as shown. Two of the regions are blue, 1 is green, and one is red. What percentage of the pane is coloured red?



- (a) 0.4% (b) 25% (c) 50% (d) 12.5% (e) none of the above

QUESTION #10:

In Terrence's music class, all of the students play at least one instrument. 14 students play piano, 8 play guitar, and 3 play drums. If 10 students play exactly two of these instruments, and none play three of these instruments, how many students are there in the class?

- (a) 14 (b) 20 (c) 25 (d) 15 (e) none of the above

QUESTION #11:

How many different ways can you make \$0.12, using Canadian coinage?

- (a) 3 (b) 4 (c) 5 (d) 6 (e) none of the above

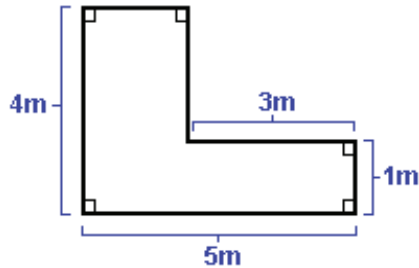
QUESTION #12:

A palindromic number reads the same from right to left as it does from left to right. How many palindromes are there between 100 and 1000?

- (a) 110 (b) 45 (c) 90 (d) 100 (e) none of the above

QUESTION #13:

Morris' kitchen is an "L" shaped room. If the ceiling is 3 m high, how much volume, in m^3 , does the kitchen occupy?



- (a) 60 (b) 18 (c) 15 (d) 33 (e) none of the above

QUESTION #14:

Farmer Ben takes down the fencing from one large square yard, and uses it for fencing 4 other square patches of equal size (with none left over). If the original square yard has a side of 36 m, what is the area of one of the 4 small patches in m^2 ?

- (a) 81 (b) 144 (c) 324 (d) 36 (e) none of the above

QUESTION #15:

A square is cut into two equal pieces, and these pieces are put together to form a rectangle where the height is four times as long as the base. If the area of the rectangle is 64 cm^2 , what is the side length of the original square?

- (a) 16 (b) 64π (c) 8 (d) 4π (e) none of the above

QUESTION #16:

Sam and Valerie are distance runners. Valerie's average speed during a race was 3 km/hour less than that of Sam. Sam completed a race in 2 hours. If Valerie took 2.5 hours, how long was the race?

- (a) 12 km (b) 14 km (c) 16 km (d) 10 km (e) none of the above

QUESTION #17: The book Michelle was reading went from page 1 to page N. The total number of digits used for the page numbers is 300. How many pages are there in Michelle's book?

- (a) 137 (b) 135 (c) 136 (d) 42 (e) none of the above

QUESTION #18:

Larry spent 60% of his gross monthly salary on car insurance. He spent \$500, or 1/5 of his salary, on groceries and restaurant meals. What did Larry's car insurance cost?

- (a) \$1,000 (b) \$1,200 (c) \$500 (d) \$1,500 (e) none of the above

QUESTION #19:

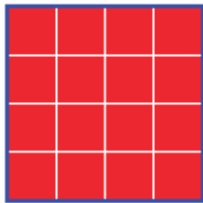
Amy, Eric and Irving are in the same physics class. On their final exam, marked out of 60, they discovered the following facts: Amy's score is 10 points higher than Eric's. Eric's score is 8 points less than Irving's. Which of the following statements are true?

- a) Amy's score is greater than Irving's.
b) Irving's score is greater than Amy's.
c) Eric's score is less than Irving's is less than Amy's.
d) a & c
e) b & c

QUESTION #20:

A 4 x 4 x 4 cube is painted red on top and bottom, and all the sides are painted blue. The cube is then cut into unit cubes. How many cubes will have red paint but no blue paint on them?

top and bottom
of the cube



- (a) 8 (b) 24 (c) 16 (d) 32 (e) none of the above