1. A restaurant uses 35 packs of carrots to make 15 servings of beef stew.

How many packs of carrots will the restaurant need to make 9 servings of beef stew?

A. 22
B. 21
C. 24
D. 27
E. 30

2. The perimeter of a rectangle is 20 centimetres.

If the length of the rectangle is 4 centimetres longer than its width, what is the area of the rectangle?

A. 3 square centimetres
B. 7 square centimetres
C. 10 square centimetres
D. 20 square centimetres
E. 21 square centimetres

3. An appliance store reduces the price of a toaster by 20 percent from its original price.

Realising that the toaster did not sell, the store further reduces the price of the toaster by another 15 percent.

The current price of the toaster is what percent of the original price of the toaster?

A. 35%
B. 49%
C. 55%
D. 68%
E. 80%

4. Thomas only played 9 games this basketball season.

For the first 8 games he played, he scored an average of 32 points per game.

How many points did he score in the last game of the season if his average score per game for the entire season was 30 points per game?

A. 14 points
B. 20 points
C. 26 points
D. 30 points

5. Three inlet pipes, **A**, **B**, and **C**, working together at their respective constant rates can fill an empty swimming pool in 9 hours.

Inlet pipes **A** and **B**, working together at their respective constant rates can fill the same swimming pool in 10 hours.

How many hours will it take inlet pipe **C**, working alone at its respective constant rate to fill the same swimming pool?

A. 75 hours
B. 80 hours
C. 90 hours
D. 100 hours
E. 105 hours

6. The 8 litres solution is made up of 45% salt and 55% water.

Some water is removed from the solution through the process of evaporation, leaving a solution that is 60% salt and 40% water.

How much water was removed from the original solution through the process of evaporation?

A. 1.2 litres
B. 2 litres
C. 2.1 litres
D. 6 litres
E. 7 litres

7. What is the value of (36 ÷ 4 + 5) – (3 × 2 + 1)?

A. -5
B. -3
C. 5
D. 7
E. 14

8. A library received a donation of 64 hardbound and paperback books.

If the number of hardback books is the number of paperback books, and if the paperback books are all autobiographies, how many paperback autobiography books were donated to the library?

A. 30
B. 32
C. 42
D. 48
E. 54

9.

The figure above is made up of identical equilateral triangles.

Martin needs to colour half of the triangles in the patter red, 4 triangles blue, and the remaining triangles green.

What fraction of the triangles in the pattern must Martin colour green?

A. $\frac{1}{12}$
B. $\frac{1}{6}$
C. $\frac{1}{4}$
D. $\frac{1}{3}$
E. $\frac{5}{12}$

10. What number is 6 more than five-sixths of itself?

A. 30
B. 36
C. 42
D. 48
E. 60

11. A machine at the factory can process 540 metric tons of iron in 18 minutes.

At this rate, how long does it take the machine to process 810 metric tons of iron?

A. 18 minutes
B. 27 minutes
C. 26 minutes
D. 54 minutes
E. 1 hour and 21 minutes

12. A bakeshop sells 36 doughnuts in one hour.

At this rate, how many doughnuts will the bakeshop sell in 2 hours and 15 minutes?

A. 54 doughnuts
B. 64 doughnuts
C. 72 doughnuts
D. 81 doughnuts
E. 90 doughnuts

13. Tom can finish tilling the farm lot by himself in 6 hours.

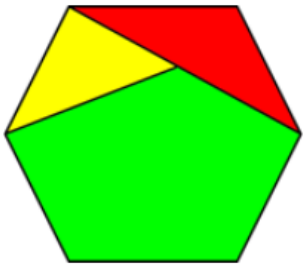
Jaden can finish tilling the same farm lot by himself in 4 hours.

Andrew can finish tilling the same farm lot by himself in 9 hours.

If the three of them work together, what fraction of the farm lot can they finish tilling in one hour?

A. 1/36
B. 1/19
C. 1/2
D. 19/36
E. 23/36

14.



In the hexagon above, the yellow portion made up 1/6 of the hexagon and the red portion made up 1/5 of the hexagon.

What portion of the hexagon does the green portion make up?

A. 19/30
B. 2/3
C. 7/10
D. 11/15
E. 23/30

15. It takes a teleporter 7 hours to transport 9 space shuttles to the Alpha Quadrant.

At this rate, how long will it take the teleporter to transport 12 space shuttles to the Alpha Quarands?

A. 9 hours 20 minutes
B. 10 hours
C. 11 hours 40 minutes
D. 12 hours
E. 14 hours 30 minutes

16. Captain Kirk takes off from the Omega Cluster, travelling at 5 light-years per hour, heading north at 9:00 AM.

Two hours later, Captain Picard takes off from the Omega Cluster, travelling at 7 light-years per hour, heading due south.

How far apart will Captain Kirk and Captain Picard be at 5:30 PM?

A. 102 light-years
B. 92 light-years
C. 88 light-years
D. 70 light-years
E. 57 light-years

17. At a hotdog eating contest, Philip can eat 5 hotdogs in 3 minutes while Gene can eat 3 hotdogs in 4 minutes.

How many hotdogs can the two of them eat in one hour?

A. 90 hotdogs
B. 124 hotdogs
C. 130 hotdogs
D. 136 hotdogs
E. 145 hotdogs

18. In a certain museum, 60% of the paintings are oil paintings and the remainder are all watercolour paintings.

Of all the paintings in the museum, 70% of the oil paintings and 90% of the watercolour paintings are abstract paintings.

What percent of the paintings in the museum are abstract paintings?

A. 82%
B. 80%
C. 78%
D. 76%
E. 72%

19. A box contains 15 green tokens, 10 red tokens, 10 black tokens, 7 blue tokens, 6 orange tokens, 5 white tokens, 4 purple tokens, and 3 yellow tokens.

If 40 tokens will be added to the box, how many of those tokens must be green to make 30% of the tokens in the box green?

A. 5
B. 10
C. 12
D.15
E. 30

20. Jen, Hilda, and Roma shared a bar of chocolate.

Jen ate 1/3 of the chocolate bar, Hilda ate 1/2 of the remaining chocolate bar, and what was left was eaten by Roma.

What fraction of the bar of chocolate was eaten by Roma?

A. 1/5
B. 1/3
C. 1/2
D. 3/5
E. 2/3

21. During a regular day, a factory produces 100 widgets, of which 1 percent are defective.

During a rush day, the factory produces 125 widgets, of which 4 percent are defective.

How many more non-defective widgets does the factory produce on a rush day than on a regular day?

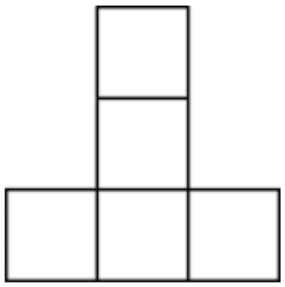
A. 20
B. 21
C. 25
D. 120
E. 125

22. The average length of the sides of a triangle is 8 centimetres.

What is the perimeter of the triangle?

A. 8cm
B. 16cm
C. 24cm
D. 32cm
E. It cannot be determined.

23.

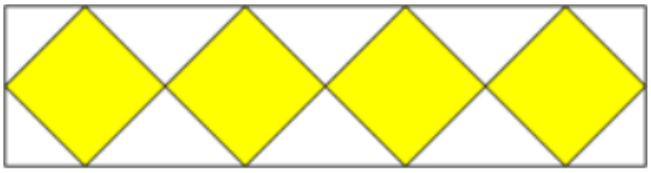


The figure above is made up of five identical squares.

If the total area of the figure is 125 square centimetres, what is the perimeter of the figure?

A. 75cm
B. 60cm
C. 55cm
D. 45cm
E. 40cm

24.



In the figure above, four identical squares are inscribed within a rectangle.

If the area of the rectangle is 32 square centimetres, what is the area of one square?

A. 2 square centimetres
B. $2\sqrt{2}$ square centimetres
C. 4 square centimetres
D. $4\sqrt{2}$ square centimetres
E. 6 square centimetres

25. In a certain appliance store, the price of a microwave oven is $400 more than the price of a toaster.

If the total cost of a microwave oven and a toaster is $735, including a 5 percent sales tax, what is the price of a toaster, excluding the sales tax?

A. $150
B. $300
C. $400
D. $550
E. $700

26. If **P** is an odd integer, and **Q** and **R** are even integers, which of the following **cannot** be an integer?

A. Q/R
B. P/Q
C. R/Q
D. PQ/R
E. PR/Q

27. Patrick, working alone, can paint 7 square metres of a wall in one hour.

Patrick and Tom, working together, can paint 22 square metres in two hours.

How many hours will it take Tom, working alone, to paint 5 square metres of the wall?

A. 7/22 hours
B. 4/5 hours
C. 5/4 hours
D. 22/7 hours
E. 15 hours

28. Jennifer can type 100 words in 40 minutes, which is twice the rate at which Lorna can type.

How many words can they type together if they worked continuously, each at their own constant rate, for 12 minutes?

A. 90 words
B. 75 words
C. 60 words
D. 45 words
E. 30 words

29. Ben can stack 2 surfboards in 3 minutes and Dave can stack 3 surfboards in 2 minutes.

Working at their respective constant rates, how long will it take both of them working together to stack 26 surfboards?

A. 10 minutes
B. 12 minutes
C. 13 minutes
D. 22 minutes
E. 24 minutes

30. The average age of 30 kids is 9.

If the age of the teacher is included, the average age becomes 10. What is the age of the teacher?

A. 35 years old

B. 52 years old

C. 40 years old

D. 39 years old

E. 38 years old

31. Hellen bought a bunch of bananas for $4.44, five baskets of apples for $4.62 per basket, two baskets of eggplants for $4.04 per basket and was taxed $2.77.

How much money did I spend in all?

A. $40

B. $38

C. $56

D. $73

E. $61

32. A man travelled from the village to the post office at the rate of 25 kilometres per hour and walked back at the rate of 4 kilometres per hour.

If the entire journey took 5 hours 48 minutes, determine the distance of the post office from that village.

A. 20 kilometres

B. 12 kilometres

C. 37 kilometres

D. 23 kilometres

E. 32 kilometres

33.

Matty bought 3 different items at the Snack Shack.

He spent a total of $4.41. What did he buy?

Snack Shack Menu

Fried Olive	$.25
Fried Lemon	$3.05
Fried Lobster Lips	$.79
Fried Cantaloupe	$1.11

A. Fried Olive, Fried Lobster Lips, and Fried Lemon

B. Fried Cantaloupe, Fried Lemon, and Fried Olive

C. Fried Lemon, Fried Lobster Lips, and Fried Cantaloupe

D. None of the above.

34.

Harley Popper has a new flying broomstick.

It uses baby oil as fuel. Harley started the day with $3\frac{3}{4}$ gallons of baby oil.

By the end of the day, she had used $\frac{1}{3}$ of the oil.

How many gallons of baby oil did she use today?

A. $1\frac{3}{7}$

B. $1\frac{1}{4}$

C. $\frac{3}{4}$

D. $1\frac{1}{8}$

E. $1\frac{1}{2}$

35.

A carpenter cuts a sheet of plywood into three sections.

The first section is three times as long as the second section, and the second section is three times as long as the third section.

What fraction of the entire sheet of plywood is the smallest section?

A. $\frac{1}{13}$

B. $\frac{1}{12}$

C. $\frac{1}{9}$

D. $\frac{1}{7}$

E. $\frac{1}{3}$