

1. Four men were shipwrecked on an island. Having no food, they went to work gathering pineapples. After gathering pineapples, they were tired and all fell asleep. After another while, one of the men awoke and was very hungry so he ate  $\frac{1}{3}$  of the pineapples - more than his proper share. He then went back to sleep. The second man awoke and being hungry, ate  $\frac{1}{3}$  of the remaining pineapples and went back to sleep. The third man did the same. When the fourth man awoke, he took only his rightful share of the remaining pineapples. Then there were 6 pineapples left. How many pineapples did the men gather?

(a) 26

(c) 27

(b) 14

(d) 18

2. When Malcolm was visiting his Grandpa's farm, he saw that the farm only raised hens and hogs. Malcolm counted 38 heads and 100 feet in the barnyard. How many hens and how many hogs did his grandpa have in the barnyard?

(a) 26 hens and 12 hogs

(c) 22 hens and 36 hogs

(b) 12 hens and 26 hogs

(d) 36 hens and 22 hogs

3. If Brandon walks 2.5km in 12 minutes, how far can he walk in half an hour (in meters at the same rate)?

(a)  $6.25 \times 10^5$  m

(c)  $6.25 \times 10^4$  m

(b)  $6.25 \times 10^3$  m

(d)  $6.25 \times 10^2$  m

4. Look for a pattern!!

$$1/2 + 1/2^2 = 3/4$$

$$1/2 + 1/2^2 + 1/2^3 = 7/8$$

$$1/2 + 1/2^2 + 1/2^3 + 1/2^4 = 15/16$$

a) What is :

$$1/2 + 1/2^2 + 1/2^3 + 1/2^4 + 1/2^5 + 1/2^6 + 1/2^7 + 1/2^8 = ???$$

b) What is the pattern?

(a)  $255/256, (2^n-1)/2^n$

(c)  $255/256 (2^n+1)/2^n$

(b)  $256/255 (2^n-1)/2^n$

(d)  $256/255(2^n+1)/2^n$

5. My father is four times as old as me. In 20 years, he will be only twice as old as me. How old is my father and how old am I?

(a) 40, 10

(c) 20, 30

(b) 60, 10

(d) 50, 25

6. Charlotte and Angie went on a vacation to Surrey B.C. together. They recorded their expenses and decided to share them equally at the end of the trip. Given the data below, how much does Angie owe Charlotte?

Charlotte Paid:

Angie Paid:

Food: \$54.77

Gas: \$38.25

Lodging: \$78.20

Entertainment: \$39.50

(a) \$72.51

(c) \$35.21

(b) \$ 42.51

(d) \$27.61

7. The Earth is about  $1.49 \times 10^8$  kilometers from the sun and about  $3.84 \times 10^5$  km away from the moon. The Distance from the Earth to the sun is about how many times as great as the distance from the Earth to the moon?

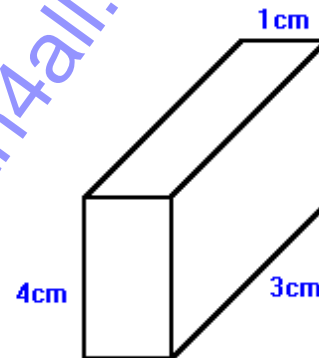
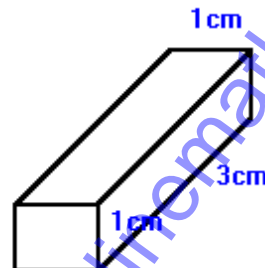
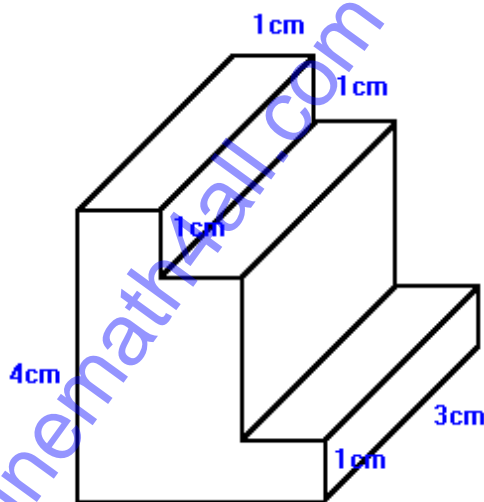
(a) 388 times

(c) 390 times

(b) 389 times

(d) 391 times

8. What is the surface area of the first solid figure?



(a)  $56 \text{ cm}^2$

(c)  $164 \text{ cm}^2$

(b)  $64 \text{ cm}^2$

(d) 128 cm

9. There are three circles:

A = the largest

B = the middle sized one

C = the smallest

Circle A has a diameter of 20cm. The smaller circles are drawn so that the radius of Circle A is the diameter of Circle B, and the radius of circle B is the diameter of Circle C. What is the area of circle C?

(a)  $4.25 \pi \text{ cm}^2$

(c)  $6.25 \pi \text{ cm}^2$

(b)  $5.25 \pi \text{ cm}^2$

(d)  $7.25 \pi \text{ cm}^2$

10. What's the number I'm thinking of? It is greater than 44 squared and less than 45 squared. 5 squared is one of its factors, and it is a multiple of 13.

(a) 1800

(c) 1900

(b) 1850

(d) 1950

11. On a flight from Sydney, Nova Scotia to Saskatoon, Sask. the plane averaged 760km/hr. On the return trip from Saskatoon to Sydney, the same plane averaged 904km/hr. The distance from Sydney to Saskatoon is approximately 4112km. How much longer was the trip west than the trip east?

(a) 61 minutes

(c) 54 minutes

(b) 58 minutes

(d) 51 minutes

12. The length of a rectangle is four times as long as its width. The area of the rectangle is 100 meters squared. What are the dimensions of the rectangle?

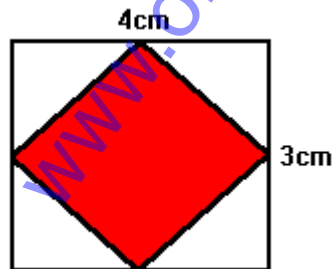
(a) 5m, 20m

(c) 10m, 15m

(b) 2m, 12m

(d) 3m, 9m

13. Big-Bird wants to make a picture frame for his picture of Elmo. He is given the piece of plywood shown. He wants to make it in a shape (the shaded area). In order to do so, he must connect all the mid-points of the sides of a rectangle. What is the area of the piece of wood he will be using for the picture frame? What is the perimeter of the inside of frame?



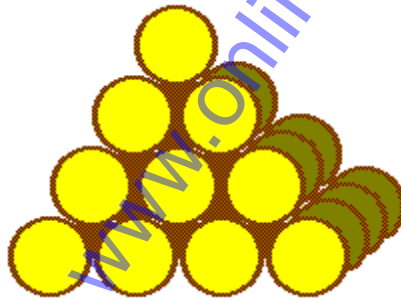
(a)  $6 \text{ cm}^2$ ,  $10 \text{ cm}$

(c)  $36 \text{ cm}^2$ ,  $10 \text{ cm}$

(b)  $26 \text{ cm}^2$ ,  $10 \text{ cm}$

(d)  $16 \text{ cm}^2$ ,  $10 \text{ cm}$

14. If I pile grapefruit in a pyramid with 1 grapefruit in the first layer, 4 in the second layer (from the top), 9 in the third layer, and 16 in the fourth layer, how many grapefruit will I need to make a pile with 10 layers?



(a) 752

(c) 385

(b) 433

(d) 825

15. On an algebra test, I had seven times as many correct answers as incorrect ones. There were 120 items on the test, how many did I get right?

(a) 150

(c) 200

(b) 204

(d) 105





19. The area of one side of the box is  $120\text{cm}^2$ . The area of another side of the box is  $72\text{cm}^2$ . The area of the top of the box is  $60\text{cm}^2$ . What is the volume of the box?

(a)  $700\text{cm}^3$

(c)  $710\text{cm}^3$

(b)  $705\text{cm}^3$

(d)  $720\text{cm}^3$

20. Belgium Cheese costs \$1.70 for  $\frac{1}{2}$  kilograms. How much will 2 and  $\frac{1}{2}$  kilograms of cheese cost?

(a) \$8.50

(c) \$6.50

(b) \$7.50

(d) \$5.50

21. Homer Simpson entered a pie eating contest at the country fair. Homer was determined to win and went into training for 6 days. Each day he ate 4 more pies than the day before. Homer ate 150 pies while in training. How many pies did he eat each day?

(a) 122 pies

(c) 150 pies

(b) 240 pies

(d) 256 pies

22. What is the smallest number by which 256 may be divided so that quotient is a perfect cube?

(a) 3

(c) 5

(b) 4

(d) 6

23. (a) Bob is reading a 445 page book. He has already read 157 pages. If he reads 24 pages a day, how long will it take him to finish the book?

(b) Bob read 157 pages of a 445 page book. He finished the rest in 9 days. How many pages did he average each day while completing the book?

(a) 12 days, 32 pages/day

(c) 32 days, 32 pages/day

(b) 22 days, 32 pages/day

(d) 42 days, 32 pages/day

24. The points A, B, C, D, and E are located on a straight line in order.

- (A) The distance from A to E is 20cm.
- (B) The distance from A to D is 15cm.
- (C) The distance from B to E is 10cm.
- (D) C is halfway between B and D.

What is the distance from B to C?

- (a) 5.5 cm
- (b) 6.5 cm
- (c) 2.5 cm
- (d) 3.5 cm

25. Who am I???

The names of my mother, my father, my brother, my sister and me in no particular order are Sandy, Sharon, Pat, Jennifer and Connie

- (A) Pat is younger than I am.
- (B) I am older than Connie.
- (C) Sharon is younger than Jennifer.

- (a) Sharon
- (b) Pat
- (c) Sandy
- (d) Jennifer

26. Kevin bought a stereo for \$4500. He sold it for \$4230. Find his loss percent?

(a) 6%

(c) 5%

(b) 4%

(d) 3%

27. The Oland Center gym has 2kg and 5kg disks for weight lifting. Due to their budget this year they only have fourteen disks in all. The total weight of the 2kg disks is the same as the total weight of the 5kg disks. What is the total weight of all the disks?

(a) 45 kgs

(c) 35 kgs

(b) 40 kgs

(d) 30 kgs

28. You, in your new red Porsche, decide to make a 160km trip to Carolina Beach, traveling at 80km/hr. You make the return trip traveling at a rate of 48km/hr. What was your average speed for the entire trip?

(a) 80 km/hr

(c) 60 km/hr

(b) 75 km/hr

(d) 55 km/hr

29. Friendly Clothing Store bought handkerchiefs, six for \$10, and sold them 4 for \$10. They made \$60 profit. How many handkerchiefs did they sell?

(a) 72

(c) 75

(b) 65

(d) 80

30. Jim has three times as many comic books as Charles. Charles has two-thirds as many comic books as Bob. Bob has 27 comic books. How many comic books does Jim have?

(a) 54

(c) 39

(b) 45

(d) 62

31. Ms. Smith, Ms. Gracia, and Ms. O'Leary all teach at St. Andrew Junior High School. One of the women is a mathematics teacher, one an art teacher and one science teacher. The art teacher, an only child, has taught the least number of years. Ms. Garcia, who married Ms. Smith's brother, has taught more years than the mathematics teacher. Name the subject which is taught by Ms. Smith

(a) Science

(c) Art

(b) Mathematics

(d) None of these

32. Joe's rich uncle gave him a looney on his first birthday. On each birthday after that he doubled his previous gift. By the day after Joe's eight birthday, what was the total amount that his uncle had given him?

(a) \$252

(c) \$254

(b) \$253

(d) \$255

33. Matthew is at a zoo. He takes a picture of a one-meter snake beside a brick wall. When he developed his pictures, the one-meter snake is 2cm long and the wall is 4.5cm high. What was the actual height of the brick wall in cm?

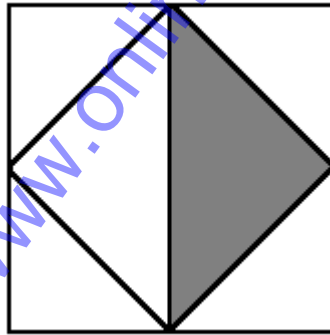
(a) 255 cm

(c) 225 cm

(b) 230 cm

(d) 250 cm

34. Batman must solve the following problem to escape the Riddler. The mid-points of the sides of a square are joined as shown. A fraction of the original square is shaded. What is the fraction? Can you help him?



(a)  $\frac{1}{4}$

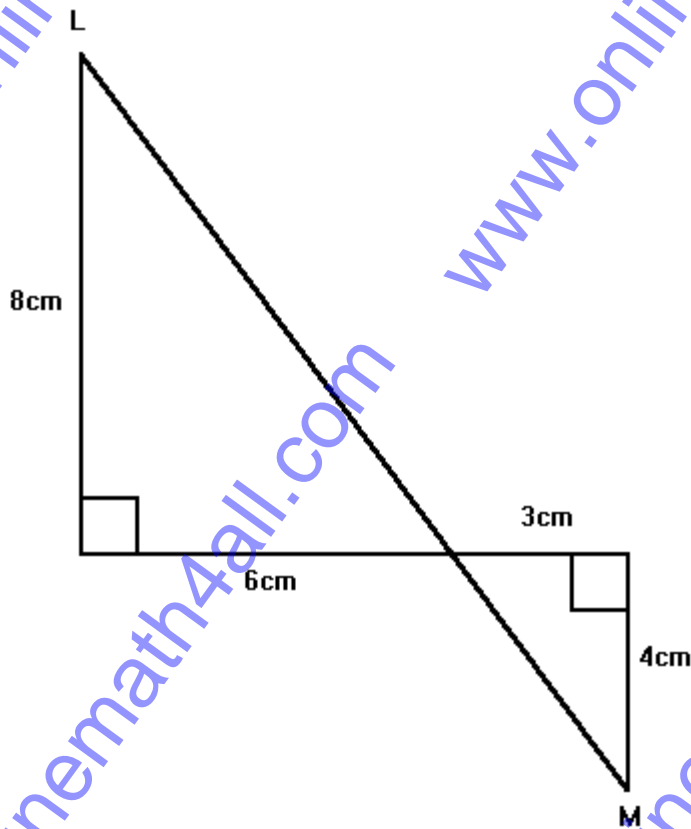
(c)  $\frac{1}{2}$

(b)  $\frac{1}{5}$

(d)  $\frac{1}{3}$



35. Lisa Simpson was in her math class. She was told to make a figure with four thumbtacks, an elastic band and a piece of wood. She made the following figure. Her math teacher measured some of the sides of her figure and told Lisa to find the length of the side LM in mm. Can you help her?



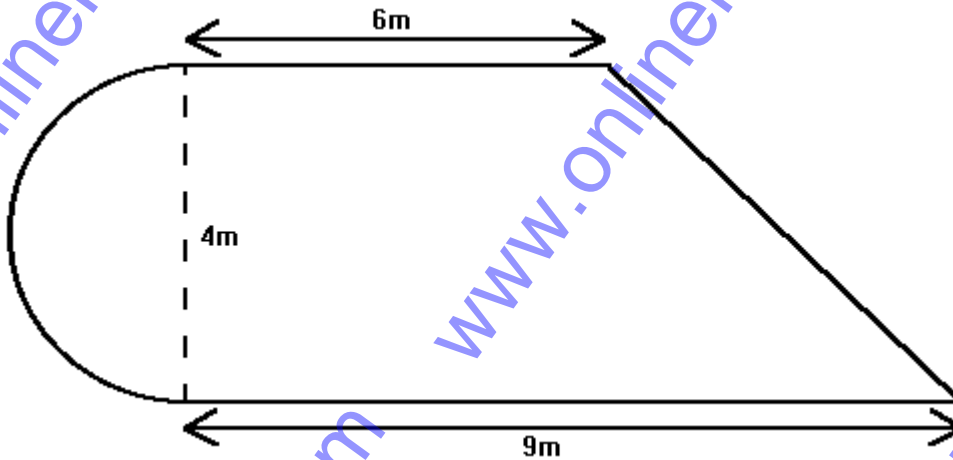
(a) 140 mm

(c) 150 mm

(b) 145 mm

(d) 155 mm

36. The Gillis's house has a pool with the shape as shown. They want to make a cover for it for the harsh winter. How much to the nearest cent are they going to have to spend on material if it costs \$5.00/m<sup>2</sup>?



(a) \$181.42

(c) \$142.25

(b) \$175.32

(d) \$166.23

37. Jane was walking the long way home from school. She started walking east. She walked 3 km east when she met a dog. She ran back to the school and decided to take the alternative route. So she walked North 4 km to her home. If she had walked straight home from where she met the dog, how far would it have been to her home?

(a) 2 km

(c) 4 km

(b) 8 km

(d) 6 km

38. Bart Simpson decided to make a graph of his weekly earning of \$120.00 from his paper route. To make the size of each sector proportional to the amount distributed what does the angle  $x$  in degrees have to be?



(a) 35 degrees

(c) 45 degrees

(b) 30 degrees

(d) 40 degrees

39. Chip said to Dale "If you give me one acorn, then we will have an equal number of acorns." Dale replied with delight "If you give me one acorn, then I will have double the number you have!" What was the total number of acorns they had in their tree? How many did Chip have and how many did Dale have?

(a) 5, 7

(c) 6, 8

(b) 10, 12

(d) 3, 4

40. Mr. MacDonald recorded the test marks for his eighth grade class of 25 students. He used the marks recorded to calculate the average to be 72. Sandra's mark of 86 was incorrectly marked as 36. What was the correct average for the test?

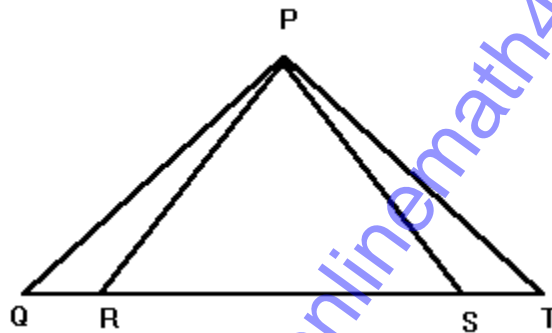
(a) 56%

(c) 64%

(b) 60%

(d) 74%

41. In the following diagram of the front view of the Great Pyramid, the measure of the angle  $PRQ$  is 120 degrees, and the measure of the angle  $PST$  is 110 degrees. What is the measure of the angle  $RPS$  in degrees?



(a)  $50^\circ$

(c)  $64^\circ$

(b)  $60^\circ$

(d)  $74^\circ$

42. Four strips of paneling 40 cm long and 4 cm wide are arranged to form a square. What is the area of the inner square in  $\text{cm}^2$ ?

(a)  $3648 \text{ cm}^2$

(c)  $3256 \text{ cm}^2$

(b)  $1296 \text{ cm}^2$

(d)  $1556 \text{ cm}^2$

43. A Christmas gift is tied with ribbon as shown. The bow requires 47 cm of ribbon. What is the total length of the ribbon in meters?



(a) 2.56

(c) 1.77

(b) 1.56

(d) 2.77

44. Silver's Cleaners decided to raise the price of dry cleaning a sports coat from \$4.00 to \$5.00. The same percentage increase was applied to dry cleaning a jacket. The old cost of dry cleaning a jacket was \$10.00. What is the new cost of dry cleaning a jacket?

(a) \$2.50

(c) \$22.50

(b) \$12.50

(d) \$32.50

45. What is the sum of all the digits in the sequence 1, 2, 3, 4, 5, 6, 7, ..., 99, 100?

(a) 899

(c) 901

(b) 900

(d) 902

46. A large piece of construction paper is .01mm thick. It is cut in half and one piece is placed on the other to make a pile. These are cut in half and all four pieces are placed in a pile. These four are cut in half and placed in a pile, and the process is continued. After the pieces have been cut and piled for the tenth time, what is the height of the pile in cm?

(a) 4.024 cm

(c) 2.024 cm

(b) 3.024 cm

(d) 1.024 cm

47. Evaluate  $(729)^{-1/6}$

(a)  $1/3$

(c)  $1/2$

(b)  $1/5$

(d)  $1/7$

48. Find the value of the following:

$$\text{Log}_{10}1000 + \text{Log}_{10}100 + \text{Log}_{10}10$$

(a) 3

(c) 6

(b) 5

(d) 4

49. Lisa Lilly was the best runner in the eighth grade. One day she ran 100m in 40 seconds, 200m in 1 minute and 10 seconds, and 200m over low hurdles in one and a half minutes. How many more seconds did it take her to run the 200m over low hurdles then it did to run the 200m dash?

(a) 40 second longer

(c) 20 seconds longer

(b) 30 seconds longer

(d) 10 second longer

50. The Adams family was going to buy a car for \$5800. The car dealer offered the Adams family two options for buying the car. They could pay the full amount in cash, or they could pay \$1000.00 down and \$230.00 a month for 24 months on the installment plan. How much more would they pay for the car on the installment plan?

(a) \$720

(c) \$220

(b) \$450

(d) \$340



Answers:

- |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 1. c  | 2. a  | 3. b  | 4. a  | 5. a  | 6. d  |
| 7. a  | 8. b  | 9. c  | 10. d | 11. d | 12. a |
| 13. a | 14. c | 15. d | 16. b | 17. a | 18. c |
| 19. d | 20. a | 21. c | 22. b | 23. a | 24. c |
| 25. a | 26. a | 27. b | 28. c | 29. a | 30. a |
| 31. b | 32. d | 33. c | 34. a | 35. c | 36. a |
| 37. c | 38. c | 39. a | 40. d | 41. a | 42. b |
| 43. c | 44. b | 45. c | 46. d | 47. a | 48. c |
| 49. c | 50. a |       |       |       |       |