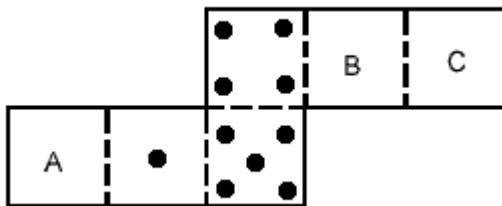


第七套

1. In a test a student got a mark of 49. His report card showed that he had scored 70 per cent. What was the maximum mark on the test?
2. What is the largest odd number that is a factor of 860 ?
3. A school charity sale raised \$4800. One quarter of this was taken to cover expenses. Three quarters of the remainder was given to Charity A and the remainder to Charity B. How much did B receive? (Ignore the dollar sign when entering your answer).
4. A drycleaner charges \$2 for up to 3 pounds in weight of clothes, and 30 cents per pound or part thereof up to a maximum weight of 10 pounds per load. What is the cost in dollars of cleaning six and a half pounds of clothes?
5. If $x > 0$, and $x^2 - 6x - 7 = 0$, what is the value of x ?
6. The diameter of circle A is one quarter the diameter of circle B. The area of circle B is how many times greater than the area of circle A ?
7. Three apples and five oranges cost 85cents, and five apples and three oranges cost 83 cents. How much will it cost to buy one apple and one orange?
8. A bag contains 2 red, 5 blue and 8 white beads. If one bead is drawn from the bag what is the probability that it is red or white?



9. The shape above is to be cut out and folded along the dotted lines to form a cubic die. Dots are to be added to faces A, B and C so that the numbers of dots on opposite faces add up to 7. How many dots should appear on face A ?
10. The median of a set of 10 consecutive integers is 3.5. What is the greatest of these 10 integers?

参考答案**1. Correct Answer:** 70**Explanation:**

$$49 = 70/100 \times \text{maximum mark}$$

$$(49 \times 100) / 70 = \text{maximum} = 70$$

2. Correct Answer: 215**Explanation:**

Factorize 860

$$860 = 2 \times 430 = 2 \times 2 \times 215 \text{ (No need to go any further because 215 is odd)}$$

3. Correct Answer: 900**Explanation:**If $\frac{3}{4}$ of the remainder went to A, then $\frac{1}{4}$ of the remainder went to B.The remainder is $\frac{3}{4}$ of the money raised = $\frac{3}{4}$ (4800)

$$\frac{1}{4} \times \frac{3}{4} \times 4800 = \frac{3}{16} \times 4800 = 900$$

4. Correct Answer: 3.20**Explanation:**

If you clean 6.5 pounds of clothes you will have to pay for 7 pounds. (That is what 'per part thereof' means)

The first 3 pounds cost \$2; the remaining 4 pounds will cost $4 \times .3$ dollars = 1.2

Total cost = 3.2

5. Correct Answer: 7**Explanation:**

Factorize the quadratic.

$$(x + 1)(x - 7) = 0$$

 $x = -1$ or 7, but since we are told $x > 0$, $x = 7$ **6. Correct Answer:** 16**Explanation:**

All circles are similar figures, so we can use the relationship that says if we take the ratio of corresponding linear dimensions (like the radius, the circumference, or corresponding arc), the ratio of the areas will be the square of the linear ratio.

The ratio of diameter of circle A to that of circle B = 1 : 4

The areas are in the ratio $(1)^2 : (4)^2 = 1 : 16$

Hence circle B is 16 times larger.

7. Correct Answer: 21**Explanation:** $3a + 5b = 85$ (where a = number of apples, and b = number of oranges)

$$5a + 3b = 83$$

Add the pair of simultaneous equations

$$8a + 8b = 168$$

$$a + b = 21$$

8. Correct Answer: $\frac{2}{3}$ **Explanation:**

The total number of beads is 15

Of these 10 are either red or white

So the chance of drawing red or white = $10/15 = \frac{2}{3}$

9. Correct Answer: 2

Explanation:

When folded up, if the square with 5 dots is the bottom, then a will be the top.

Since opposite faces must add up to 7, A must have 2 dots.

10. Correct Answer: 8

Explanation:

The median of a set of integers is the middle number in the ranked series. If there is an even number of terms in the series, the median will be the average of the two middle terms. Here we have ten terms. The median is half-way between 3 and 4 and so we need four integers less than 3 and four integers more than 4 to complete the list.

The greatest number will be $4 + 4 = 8$.

The best way to do these problems if the numbers are small is to write out the list:

-1, 0, 1, 2, 3, 4, 5, 6, 7, 8