CMA Students Newsletter (For Foundation Students)

Vol.7A: April 15, 2015

Paper 1: Fundamentals of Economics and Management (FEM)

CAUSES AND OUTCOMES OF CONFLICT

There are many potential root causes of conflict at work. We'll go over six of them here. Remember, anything that leads to a disagreement can be a cause of conflict. Although conflict is common to organizations, some organizations have more than others.

Potential Causes of Conflict

CAUSES OF CONFLICT

(i) Organizational Structure

Conflict tends to take different forms, depending upon the organizational structure. For example, if a company uses a matrix structure as its organizational form, it will have decisional conflict built in, because the structure specifies that each manager report to two bosses. For example, global company ABB Inc. is organized around a matrix structure based on the dimensions of country and industry. This structure can lead to confusion as the company is divided geographically into 1,200 different units and by industry into 50 different units.

(ii) Limited Resources

Resources such as money, time, and equipment are often scarce. Competition among people or departments for limited resources is a frequent cause for conflict. For example, cutting-edge laptops and gadgets such as a BlackBerry or iPhone are expensive resources that may be allocated to employees on a need-to-have basis in some companies. When a group of employees have access to such resources while others do not, conflict may arise among employees or between employees and management. While technical employees may feel that these devices are crucial to their productivity, employees with customer contact such as sales representatives may make the point that these devices are important for them to make a good impression to clients. Because important resources are often limited, this is one source of conflict many companies have to live with.

(iii) Task Interdependence

Another cause of conflict is task interdependence; that is, when accomplishment of your goal requires reliance on others to perform their tasks. For example, if you're tasked with creating advertising for your product, you're dependent on the creative team to design the words and layout, the photographer or videographer to create

the visuals, the media buyer to purchase the advertising space, and so on. The completion of your goal (airing or publishing your ad) is dependent on others.

(iv) Incompatible Goals

Sometimes conflict arises when two parties think that their goals are mutually exclusive. Within an organization, incompatible goals often arise because of the different ways department managers are compensated. For example, a sales manager's bonus may be tied to how many sales are made for the company. As a result, the individual might be tempted to offer customers "freebies" such as expedited delivery in order to make the sale. In contrast, a transportation manager's compensation may be based on how much money the company saves on transit. In this case, the goal might be to eliminate expedited delivery because it adds expense. The two will butt heads until the company resolves the conflict by changing the compensation scheme. For example, if the company assigns the bonus based on profitability of a sale, not just the dollar amount, the cost of the expediting would be subtracted from the value of the sale. It might still make sense to expedite the order if the sale is large enough, in which case both parties would support it. On the other hand, if the expediting negates the value of the sale, neither party would be in favor of the added expense.

(v) Personality Differences

Personality differences among coworkers are common. By understanding some fundamental differences among the way people think and act, we can better understand how others see the world. Knowing that these differences are natural and normal lets us anticipate and mitigate interpersonal conflict—it's often not about "you" but simply a different way of seeing and behaving. For example, Type A individuals have been found to have more conflicts with their coworkers than Type B individuals.

(vi) Communication Problems

Sometimes conflict arises simply out of a small, unintentional communication problem, such as lost e-mails or dealing with people who don't return phone calls. Giving feedback is also a case in which the best intentions can quickly escalate into a conflict situation. When communicating, be sure to focus on behavior and its effects, not on the person. For example, say that Jeff always arrives late to all your meetings. You think he has a bad attitude, but you don't really know what Jeff's attitude is. You do know, however, the effect that Jeff's behavior has on you. You could say, "Jeff, when you come late to the meeting, I feel like my time is wasted." Jeff can't argue with that statement, because it is a fact of the impact of his behavior on you. It's indisputable, because it is your reality. What Jeff can say is that he did not intend such an effect, and then you can have a discussion regarding the behavior.

In another example, the Hershey Company was engaged in talks behind closed doors with Cadbury Schweppes about a possible merger. No information about this deal was shared with Hershey's major stakeholder, the

Hershey Trust. When Robert Vowler, CEO of the Hershey Trust, discovered that talks were underway without anyone consulting the Trust, tensions between the major stakeholders began to rise. As Hershey's continued to underperform, steps were taken in what is now called the "Sunday night massacre," in which several board members were forced to resign and Richard Lenny, Hershey's then current CEO, retired. This example shows how a lack of communication can lead to an escalation of conflict. Time will tell what the lasting effects of this conflict will be, but in the short term, effective communication will be the key. Now, let's turn our attention to the outcomes of conflict.

OUTCOMES OF CONFLICT

One of the most common outcomes of conflict is that it upsets parties in the short run. However, conflict can have both positive and negative outcomes. On the positive side, conflict can result in greater creativity or better decisions. For example, as a result of a disagreement over a policy, a manager may learn from an employee that newer technologies help solve problems in an unanticipated new way.

Positive outcomes include the following:

- Consideration of a broader range of ideas, resulting in a better, stronger idea
- Surfacing of assumptions that may be inaccurate
- Increased participation and creativity
- Clarification of individual views that build learning

On the other hand, conflict can be dysfunctional if it is excessive or involves personal attacks or underhanded tactics.

Examples of negative outcomes include the following:

- Increased stress and anxiety among individuals, which decreases productivity and satisfaction
- Feelings of being defeated and demeaned, which lowers individuals' morale and may increase turnover
- A climate of mistrust, which hinders the teamwork and cooperation necessary to get work done

Is Your Job at Risk for Workplace Violence?

You may be at increased risk for workplace violence if your job involves the following:

Dealing with People

- Caring for others either emotionally or physically, such as at a nursing home.
- Interacting with frustrated customers, such as with retail sales.
- Supervising others, such as being a manager.
- Denying requests others make of you, such as with customer service.

Being in High-Risk Situations

- Dealing with valuables or exchanging money, such as in banking.
- Handling weapons, such as in law enforcement.
- Working with drugs, alcohol, or those under the influence of them, such as bartending.
- Working nights or weekends, such as gas station attendants.

Key Takeaway

Conflict has many causes, including organizational structures, limitations on resources, task interdependence, goal incompatibility, personality differences, and communication challenges. Outcomes of well-managed conflict include increased participation and creativity, while negatives of poorly managed conflict include increased stress and anxiety. Jobs that deal with people are at higher risk for conflict.

Exercise

What are some primary causes of conflict at work?

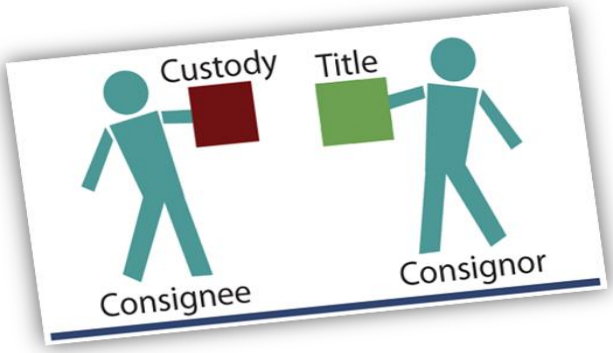
What are the outcomes of workplace conflict? Which types of job are the most at risk for workplace violence?

Why do you think that is?

What outcomes have you observed from conflict?

Paper 2: Fundamentals of Accounting (FOA)

CONSIGNMENT



Question No: 1

- Mr. A sent 100 units to Mr. B costing ₹200 each.
- Expenses by Mr. A for carriage ₹5000.
- 2 units were lost – in – transit.

Options:

Value of Abnormal Loss is —

(i) ₹400
(ii) ₹500
(iii) ₹200
(iv) None of these

Answer:

The answer is (ii) ₹500.

Particulars	₹
Cost 100 × ₹200	**20,000**
Add: Carriage	**5,000**
	25,000
Less: Abnormal Loss	**500**
	24,500

Question No: 2

- Mr. P consigned 5000 liters of oil to Mr. M @ ₹50 per litre.
- Expenses incurred by Mr. P ₹3,000.
- Non - recurring Expenses by Mr. M ₹2,000.
- Normal Loss = 2%.
- Total Loss = 120 litres.
- Mr. M sold 4,700 litres @ ₹80/ litre.
- Commission @ 10%.

Computation

Particulars	₹
Cost 5,000 @ ₹50	**2,50,000**
Add: Expenses	**3,000**
	2,53,000
Less: Abnormal Loss (2 %) $\left(\frac{₹2,53,000}{5,000}\times 20\right)$	**1,020**
Add: Non-recurring Expenses	**2,000**
	2,53,980

Quantity
5,000 – 100 – 20 = 4,880 litres

Quantity		
[5,000 – 100 – 20] litres		= 4,880
	litres	- 4,700
	litres	180

(i) Value of Abnormal Loss is

Options:

(i)₹2,530,

(ii)₹1,012,

(iii)₹2,500,

(iv) None of these

Answer:

The answer is — (ii) ₹1,012.

Working Note:

$$\left(\frac{₹2,53,000}{5,000}\times 20\right)$$

=₹1,012

(ii) Value of Normal Loss is

Options:

(i)₹2,530

(ii)₹1,012

(iii)₹3,000

(iv) None of these

Answer:

The answer is — (iv) None of these

(iii)Value of Closing Stock is

Options:

(i)₹2,530

(ii)₹1,012

(iii)₹9,368

(iv) None of these

Answer:

The answer is — (iv) ₹9,368

Working Note:

$$\left(\frac{₹2,53,980}{4,880}\times 180\right)$$

=₹9,368

Question No: 3

- Cost Price — ₹100
- Invoice Price — ₹120
- Sale Price — ₹150
- Ordinary Commission — 10%
- Del Credere Commission — 5%
- Special Commission — 25%

Options:

A. Ordinary Commission is (i)₹12, (ii)₹10, (iii)₹30, (iv)₹15.

B. Del Credere Commission is (i)₹5, (ii)₹7.50, (iii)₹10, (iv)₹6.

C. Special Commission (i)₹5, (ii)₹7.50, (iii)₹6, (iv)₹30.

Answer of A.

The answer is — (iv) ₹15.

Ordinary Commission

=10% of ₹150

= ₹15.

Answer of B.

The answer is — (ii) ₹7.5.

Del Credere Commission

= 5% of ₹150

= ₹7.50.

Answer of C.

The answer is — (iv) ₹7.50.

Special Commission is

= 25% of (Sale Price – Invoice Price)

= 25% of ₹(150 - 120)

= 25% of ₹30

= ₹7.50.

Paper 3: Fundamentals of Laws and Ethics (FLE)

RIGHTS AND DUTIES OF PARTNER UNDER PARTNERSHIP ACT 1932

Partnership is the relation between persons who have agreed to share the profit of business carried on by all or any of them acting for all. The person who has entered into partnership with one another are called partner. The rights and duties of partner. The rights and duties of partners are determined in accordance with the agreement of the firm, are agent as well as principals.

PARTNER:

The person who enters into partnership trough agreement is known as partner. He has agreed to divide profit and share in loss.

KINDS OF PARTNER:

Following are kinds of partner:

(i) Active partner

(ii) Silent partner

(iii) Partner in profit

(iv) Secret partner

(v) Nominal partner

(vi) Sub-partner

(vii) Partner by estoppels

(viii) Junior partner

(ix) Senior partner

(x) Minor partner

(xi) Partner with limited liability

(xii) Partner with unlimited liability

RIGHTS OF PARTNER:

Following are the rights of a partner.

(I) Right to manage the business:

Every partner has right to take part in the management of business.

(II) Right to express opinions:

Every partner has right to express his opinions relation to business matters.

(III) Right to access the accounts books.

Every partner has right to access the account books of firm.

(IV) Right to share the profit:
Every partner has right to share the profit of the business.

(V) Right to interest on capital:
Every partner can charge interest on capital contributed by him.

(VI) Right to interest on advances:
Every partner has right to interest on advances at the of 6% per annum.

(VII) Right to be indemnified:
Every partner has right to be indemnified by the firm in respect of payment by him.

Case law
P. L. D 1958 Kar 251
Any partner obtaining credit on his own behalf cannot bind other partners and they are not liable.

(VIII) Partner's authority in emergency:
Partner has right to act in emergency to protect the firm from loss.

Conditions
(i) There must be an emergency.
(ii) The act must be done for the purpose of protecting the firm from loss.
(iii) The act must be such as a person of ordinary prudence, would have done in his own case acting under similar circumstances.

(IX) Right to give consent for new partner:
Every partner has right to prevent the introduction of a new partner unless he consents to that.

(X) Right to retire:
Every partner has right to retire from the firm.

(XI) Right not to be expelled:
A partner cannot be expelled from firm by any majority of partners provided the decision is made in good faith and there is a provision in contract.

(XII) Right to carry on competing business:
Every out going partner has a right to carry on a business similar to that of the firm subject to certain restrictions.

(XIII) Right of dissolution of firm:
Every partner has right to file suit for dissolution of firm.

(XIV) Right to restrain from use of firm name or firm property:
Every partner has the right to see that the property of the firm is used only for the purpose of partnership.

(XV) Right of the partner who leaves the firm due to any reason is entitled to claim any share according to the agreement.

DUTIES OF PARTNER:

Following are the duties of a partner.

(I) Duty to carry on business:
Every partner is bound to carry on the business of the firm to common advantage.

(II) Duty to maintain true accounts:
Every partner must render true and proper account to his co-partner.

(III) Duty to keep secrecy:
It is duty of every partner that he should maintain the secrecy for the business.

(IV) Duty to provide information:
Every partner should provide all the necessary information about the business to co-partners.

(V) Duty to compensate:
It is duty of every partner to compensate any loss incurred by him.

(VI) Duty to abide by the decisions:
Every partner should abide by the decision taken by the majority of the partners.

(VII) Duty to share the loss:
Every partner shall bear the loss equally borne by the firm irrespective of their capital contribution.

(VIII) Duty not to use firm property for his own.
It is the duty of every partner of the firm to hold and use the property of the firm only for the purpose of business.

(IX) Sincere and faithful:
Every partner should be just and faithful to the other partners.

(X) Duty to indemnify for willful neglect:
Every partner shall indemnify the firm for any loss caused to it by his willful neglect in the conducted of business of firm.

(XI) Duty not to carry other business.
It is the duty of a partner not to carry other business.

(XII) Duty to pay profit to firm:
If a partner earns profit from any source of the firm it should be paid to firm.

(XIII) Duty to be liable jointly and severally:
Every partner is liable jointly and severally for all the acts of the firm.

(XIV) Duty not to transfer his rights:
A partner cannot transfer his rights and interest in the firm to an outsider to make him partner in the business without the consent of others partners.

CONCLUSION:
To conclusion it can be said that, partner is a person who has agreed to share the profit of the business. Each partner acts as an agent of the other partner of the firm. Every partner has right and duties under the agreement made by them.

Paper 4: Fundamentals of Business Mathematics and Statistics (FBMS)

SQUARE ROOTS OF PERFECT SQUARES

What is square root?

To understand square roots it will be important to understand what are squares. Squaring of a number can be defined as multiplying a number by itself. Thus, when we multiply 4 by 4 we are said to have 'squared' the number four.

The symbol of square is represented by putting a small 2 above the number.

E.g. (a) $4^2 = 4 \times 4 = 16$
(b) $5^2 = 5 \times 5 = 25$

From the above example we can say that 16 is the square of 4, and 4 is the 'square root' of 16. Similarly, 25 is the square of 5, and 5 is the square-root of 25.

METHOD

To find the square roots it is necessary to be well versed with the squares of the numbers from 1 to 10. The squares are given below. Memorize them before proceeding ahead.

NUMBER	SQUARE
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100

In the chapter dealing with perfect cube roots we observed that if the last digit of the cube is 1 the last digit of the cube root is also 1. If the last digit of the cube is 2 then the last digit of the cube-root is 8 and so on. Thus, for every number there was a unique corresponding number.

However in square roots we have more than one possibility for every number. Look at the first row. Here, we have 1 in the number column and 1 in the square column. Similarly, in the ninth row we have 1 in the number column and 1 (of 81) in the square column. Thus, if the number ends in 1, the square root ends in 1 or 9 (because 1 x 1 is one and 9x9 is eighty-one). Do not worry if you do not follow this immediately. You may glance at the table below as you read these explanations, then all will be clear.

- Similar to the 1 and 9 relationship, if a number ends in 4 the square root ends in 2 or 8. (because 2 x 2 is four and 8 x 8 is sixty-four)
- If a number ends in 9, the square root ends in 3 or 7. (because 3 x 3 is nine and 7 x 7 is forty-nine)
- If a number ends in 6, the square root ends in 4 or 6. (because 4 x 4 is 16 and 6 x 6 is 36)
- If the number ends in 5, the square root ends in 5 (because 5 x 5 is twenty-five)
- If the number ends in 0, the square root also ends in 0 (because 10 x 10 is 100)

On the basis of such observations, we can form a table as given below:

The Last Digit of the Square	The Last Digit of the Square Root
1	1 or 9
4	2 or 8
9	3 or 7
6	4 or 6
5	5
0	0

Whenever we come across a square whose last digit is 9, we can conclude that the last digit of the square root will be 3 or 7. Similarly, whenever we come across a square whose last digit is 6, we can conclude that the last digit of the square root will be 4 or 6 and so on....

Now, I want you to look at the column in the left. It reads 'Last digit of the square' and the numbers contained in the column are 1, 4, 9, 6, 5, and 0. Note that the numbers 2, 3, 7 and 8 are absent in the column. That means there is no perfect square which ends with the numbers 2, 3, 7 or 8. Thus we can deduct a rule:

'A perfect square will never end with the digits 2, 3, 7 or 8'

At this point we have well understood how to find the last digit of a square root. However, in many cases we will have two possibilities out of which one is correct. Further, we do not know how to find the remaining digits of the square root. So we will solve a few examples and observe the technique used to find the complete square root.

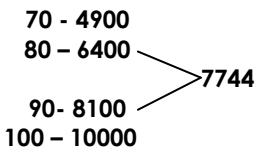
Before proceeding ahead with the examples, I have given below a list of the squares of numbers which are multiples of 10 up to 100. This table will help us to easily determine the square roots.

NUMBER	SQUARE
10	100
20	400
30	900
40	1600
50	2500
60	3600
70	4900
80	6400
90	8100
100	10000

Question:

Find the square root of 7744.

- The number 7744 ends with 4. Therefore the square root ends with 2 or 8. The answer at this stage is __2 or __8.
- Next, we take the complete number 7744. We find that the number 7744 lies between 6400 (which is the square of 80) and 8100 (which is the square of 90).



The number 7744 lies between 6400 and 8100. Therefore, the square root of 7744 lies between the numbers 80 and 90.

- From the first step we know that the square root ends with 2 or 8. From the second step we know that the square root lies between 80 and 90. Of all the numbers between 80 and 90 (81, 82, 83, 84, 85, 86, 87, 88, 89) the only numbers ending with 2 or 8 are 82 or 88. Thus, out of 82 or 88, one is the correct answer.
  (Answer at this stage is 82 or 88).

- Observe the number 7744 as given below:

80 - 6400
90- 8100 > **7744**

Is it closer to the smaller number 6400 or closer to the bigger number 8100?

If the number 7744 is closer to the smaller number 6400 then take the smaller number 82 as the answer. However, if it is closer to the bigger number 8100, then take 88 as the answer.

In this case, we observe that 7744 is closer to the bigger number 8100 and hence we take 88 as the answer.
The square root of 7744 is 88.

Question:

Find the square root of 9801.

- The last digit of the number 9801 is 1 and therefore the last digit of the square root will be either 1 or 9. The answer at this stage is _____ 1 or _____9.

- Next, we observe that the number 9801 lies between 8100 (which is the square of 90) and 10000 (which is the square of 100). Thus, our answer lies between 90 and 100. Our possibilities at this stage are:
  91, 92, 93, 94, 95, 96, 97, 98, 99

- However, from the first step we know that the number ends with a 1 or 9. So, we can eliminate the numbers that do not end with a 1 or 9.
  91, ~~92, 93, 94, 95, 96, 97, 98~~, 99

- The two possibilities at this stage are 91 or 99. Lastly, we know that the number 9801 is closer to the bigger number 10,000 and so we take the bigger number 99 as the answer.

90- 8100
100- 10000 > **9801**

Question:

Find the square root of 5184.

- 5184 ends in 4. So the square root ends in either 2 or 8 (Answer = _____ 2 or _____ 8)
- 5184 is between 4900 and 6400. So the square root is between 70 and 80. Combining the first two steps, the only two possibilities are 72 and 78
- Out of 4900 and 6400, our number 5184 is closer to the smaller number 4900 (70 x 70). Thus, we take the smaller number 72 as the correct answer

Question:

Find the square root of 2304.

- 2304 ends in 4 and so the root either ends in a 2 or in a 8
- 2304 lies between 1600 and 2500. So, the root lies between 40 and 50.
- Thus, the two possibilities are 42 and 48.
- Lastly, the number 2304 is closer to the bigger number 2500. Hence, out of 42 and 48 we take the bigger number 48 as the correct answer.

Question:

Find the square root of 529.

- 529 ends with a 9. The answer is _____ 3 or _____ 7.
- It lies between 20 and 30. The possibilities are 23 or 27.
- 529 is closer to the smaller number 400 and hence 23 is the answer.

We have seen five different examples and calculated their square roots. However, the final answer in each case is always a two-digit number. In most exams and even in general life, one will come across squares whose roots are a two-digit answer. Thus, the above examples are sufficient and there is no necessity to stretch the concept further. However, we will study a couple of examples involving big numbers so that you will understand the fundamentals thoroughly.

Question:

Find the square root of 12544.

The number 12544 ends with a 4. So, the square root end; with 2 or 8. The answer at this stage is ___ 2 or __ 8.

- Further, we know that the square of 11 is 121 and so the square of 110 is 12100. Similarly, the square of 12 is 144 and so the square of 120 is 14400.

90- 8100
100- 10000
110- 12100
120 - 14400 > **12544**

- The number 12544 lies between 12100 (which is the square of 110) and 14400 (which is the square of 120) Thus, the square root of 12544 lies between 110 and 120.
- But we know that the square root ends with 2 or 8. Hence, our only possibilities are 112 or 118.
- Lastly, 12544 is closer to the smaller number 110 and hence we take the smaller possibility 112 as the answer.

The square root of 12544 is 112.

Question:

Find the square root of 25281.

- The number 25281 ends with a 1. Therefore the square root ends with a 1 or a 9. The answer at this stage is _____1 or _____9.
- We know that the square of 15 is 225 and therefore the square of 150 is 22500. Similarly, the square of 16 is 256 and therefore the square of 160 is 25600.

150-22500
160 -25600 > 25281

- We know that the root lies between 150 and 160 and hence the only possibilities are 151 and 159.
- Lastly, the number 25281 is closer to the bigger number 25600 and hence we take the bigger number 159 as the correct answer.

We have thus seen that the concept can be expanded to numbers of any length.

COMPARISON

As usual, we will be comparing the normal technique of calculation with our approach. In the traditional method of calculating square-roots we use prime numbers as divisors.

Prime numbers are numbers which can be divided by themselves and by 1 only. They will not come in the multiplication table of any other number. They include numbers like 2, 3, 5, 7, 11, 13 and so on.

Let us say you want to find the square root of 256. Then, the process of calculating the square root of 256 is as explained below.

2	256
2	128
2	64
2	32
2	16
2	8
2	4
2	2
	1

First we divide the given number 256 by the prime number 2 and get the answer as 128.

- Next, we divide 128 by 2 and get the answer 64
- 64 divided by 2 gives 32
- 32 divided by 2 gives 16
- 16 divided by 2 gives 8
- 8 divided by 2 gives 4
- 4 divided by 2 gives 2
- 2 divided by 2 gives 1
  (We terminate the division when we obtain 1).

Thus, 256 = 2x2x2x2x2x2x2x2.

To obtain the square root, for every two similar numbers, we take one number. So, we form four pairs containing two 2's each. From every pair we take one 2.

It can be represented as:

$$256 = \underline{2 \times 2} \times \underline{2 \times 2} \times \underline{2 \times 2} \times \underline{2 \times 2}$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$
$$2 \times 2 \times 2 \times 2 = 16$$

Thus, the square root of 256 is 16.

Question:

Find the square root of 196 using prime factors.

2	196
2	98
7	49
7	7
	1

$196 = \underline{2 \times 2} \times \underline{7 \times 7}$

$2 \times 7 = 14$

Therefore, the square root of 196 is 14.

From the above two examples it is clear that the prime factor method of calculating square roots is time consuming and tedious. Further, if small numbers like 256 and 196 take such a lot of time, one can imagine how difficult it will be to calculate the square roots of numbers like 8281, 7744, etc. Some people find it simply impossible to calculate the square roots of such numbers using the prime factor technique. Hence, the alternate approach as mentioned in this chapter will be of immense utility to the student.

Question:

Calculate the square root of 576.

Prime Factor Method

2	576
2	288
2	144
2	72
2	36
2	18
3	9
3	3
	1

= 24

Current Method

20 = 400 — 24 = 576

30 = 900 — 26

From the comparison we can see that the method described in this chapter is much faster and the chances of making a mistake are greatly reduced. Further, while the prime factor method will prove extremely tedious to calculate the square roots of numbers like 4356 and 6561, the current method will help us calculate them instantly!

EXERCISE

PART A

Q. (1) Find the square roots of the following numbers with the aid of writing material.

(1) 9216

(2) 7569

(3) 5329

(4) 3364

(5) 1681

PART B

Q. (1) Find the square roots of the following numbers without the aid of writing material.

(1) 9801

(2) 5625

(3) 1936

(4) 3481

(5) 1369

PART C

Q. (1) Find the square roots of the following numbers with or without the aid of writing material.

(1) 12769

(2) 15625

(3) 23104

(4) 11881