RS Aggarwal Solutions for Class 6 Maths Chapter 13
Angles and their Measurement

Exercise 13A

1.

Solution

Scissors, a pair of compasses and clock are the examples of angles.

2.

Solution

In the given figure the vertex is B

Arms of ∠ABC are rays BA and BC, respectively.

3.

Solution

(i) There are three angles in this figure. They are ∠CAB, ∠ACB and ∠ABC

(ii) This figure consists of four angles. They are ∠BAD, ∠ABC, ∠BCD and ∠CDA

(iii) This figure has eight angles. They are ∠ABD, ∠BAD, ∠ADB, ∠DBC, ∠BDC, ∠DCB, ∠ABC and ∠ADC

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Exercise 13B   PAGE NO: 179

1.

Solution

(i) ∠AOB is an obtuse angle since its measure is more than $90°$ but less than $180°$

(ii) ∠COD is right angle whose measure is $90°$

(iii) ∠FOE is a straight angle whose measure is $180°$

(iv) ∠POQ is reflex angle since its measure is more than $180°$ but less than $360°$

(v) ∠HOG is an acute angle since its measure is less than $90°$

(vi) ∠POP is complete angle since its measure is $360°$

2.

Solution

(i) $30°$ is an acute angle since it is less than $90°$ but more than $0°$

(ii) $91°$ is an obtuse angle as it is more than $90°$ and less than $180°$

(iii) $179°$ is an obtuse angle since it is more than $90°$ and less than $180°$

(iv) $90°$ is right angle as it measure exact $90°$

(v) $181°$ is a reflex angle whose measure is more than $180°$ but less than $360°$

(vi) $360°$ is a complete angle whose measure is exact $360°$

(vii) $128°$ is an obtuse angle since it is more than $90°$ but less than $180°$

(viii) $(90.5)°$ is an obtuse angle since it is more than $90°$

(ix) $(38.3)°$ is an acute angle since it is less than $90°$

(x) $80°$ is an acute angle since it is less than $90°$

(xi) $0°$ is zero angle

(xii) $15°$ is an acute angle since it is less than $90°$

3.

Solution

(i) One right angle measure is $90°$

(ii) Two right angles measure = $90° + 90°$

= $180°$

(iii) Three right angles measure = $90° + 90° + 90°$

= $270°$

(iv) Four right angle measure = $90° + 90° + 90° + 90°$

= $360°$

(v) $(2 / 3 \times 90^\circ)$ measure = $2 \times 30^\circ = 60^\circ$

(vi) $(1 + \frac{1}{2})$ right angles measures = $(3 / 2 \times 90^\circ)$

= 135°

Exercise 13C   PAGE no: 182

1.

Solution

(i) By measuring ∠BOA placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 45°

(ii) By measuring ∠PQR placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 75°
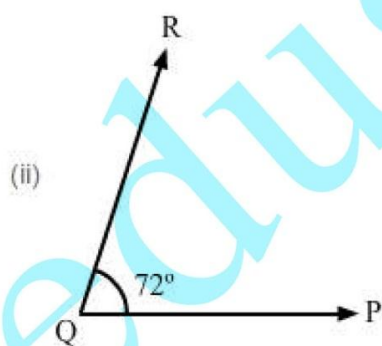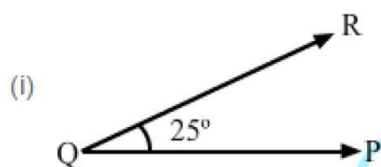
(iii) By measuring ∠DEF placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 135°

(iv) By measuring ∠LMN placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 55°

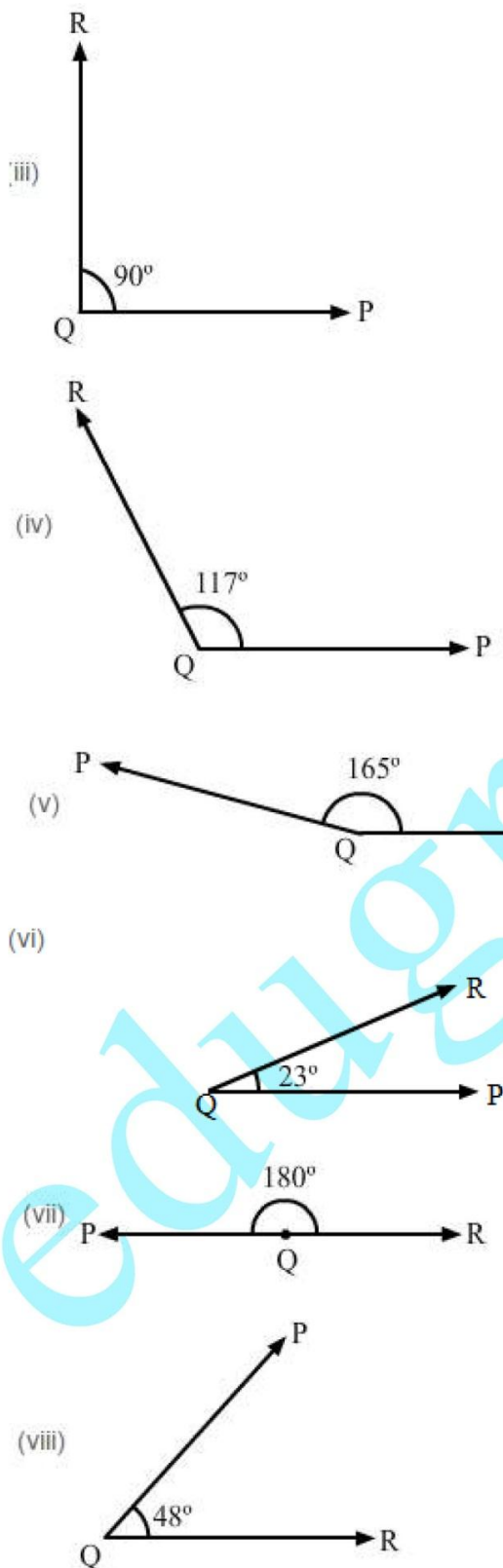(v) By measuring ∠RST placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 135°

(vi) By measuring ∠GHI placing the protractor on one arm and measuring the angle through the other arm that coincides with the angle of the protractor is 75°

2.

Solution

(i)

(ii)

(iii)

R

90°

Q ———→ P

(iv)

R

117°

Q ———→ P

(v)

P ←——— 165°

Q ———→ R

(vi)

R

23°

Q ———→ P

(vii)

180°

P ←——— Q ———→ R

(viii)

P

48°

Q ———→ R

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Exercise 13D   **PAGE NO: 182**

1.

Solution

The common initial point is known as vertex of the angle. Hence, it lies on the angle

Option (c) is the correct answer

2.

Solution

The figure formed by the angle with the same initial point is called an angle

Option (c) is the correct answer

3.

Solution

An angle measuring 180^0 is a straight line

Option (c) is the correct answer

4.

Solution

An angle measuring 90^0 is called a right angle

Option (b) is the correct answer

5.

Solution

An angle measuring 91^0 is called an obtuse angle which is more than 90^0 but less than 180^0

Option (b) is the correct answer

6.

Solution

An angle measuring 270^0 is a reflex angle since it is more than 180^0 but less than 360^0

Option (d) is the correct answer

7.

Solution

The measure of a straight angle is 180^0

Option (c) is the correct answer