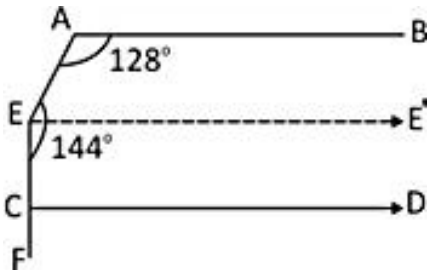
Lines & Angles Questions for CDS, SSC & Railways Exams

Lines & Angles Quiz 2

Directions: Study the following questions carefully and choose the right answer.

1. In the given figure AB || CD, ∠A = 128°, ∠E = 144°. Then, ∠FCD is equal to:



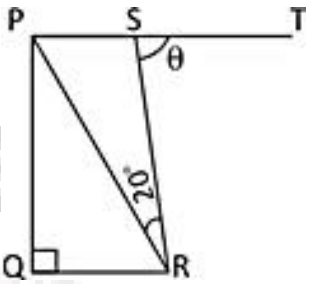
A. 72°

B. 64°

C. 136°

D. 92°

2. In the trapezium PQRS, QR || PS, ∠Q = 90°, PQ = QR and ∠PRS = 20°. If ∠TSR = θ, then the value of θ is:



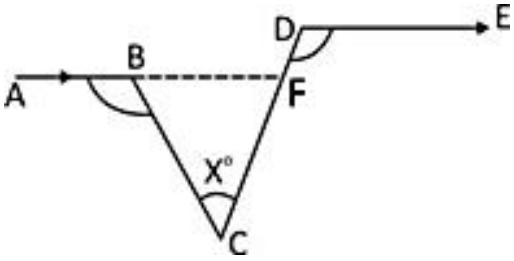
A. 75°

B. 55°

C. 65°

D. 45°

3. In the adjoining figure, ∠ABC = 100°, ∠EDC = 120° and AB || DE. Then, ∠BCD is equal to:



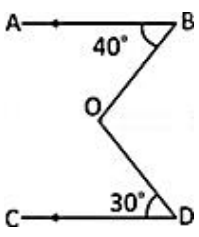
A. 80°

B. 60°

C. 40°

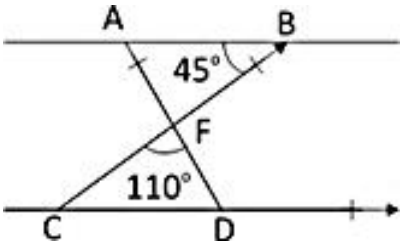
D. 20°

4. In the given figure, AB || CD, ∠ABO = 40° and ∠CDO = 30°. If ∠DOB = x°, then the value of x is:



A. 35° B. 110° C. 70° D. 140°

5. In the given figure, AB || CD, m∠ABF = 45° and m∠CFC = 110°. Then, m∠FDC is:



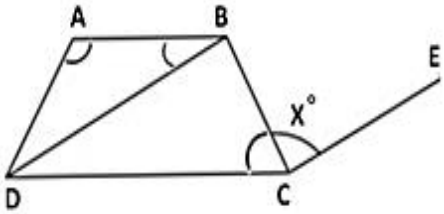
A. 25°

B. 45°

C. 35°

D. 30°

6. In the given figure, line CE is drawn parallel to DB. If ∠BAD = 110°, ∠ABD = 30°, ∠ADC = 75° and ∠BCD = 60°, then the value of x° is:



A. 45°

B. 75°

C. 85°

D. 120°

7. If two supplementary angles differ by 44°, then one of the angle is:

A. 72° B. 102° C. 65° D. 68°

8. Consider the following statements If two straight lines intersect, then

I. vertically opposite angles are equal.

II. vertically opposite angles are supplementary.

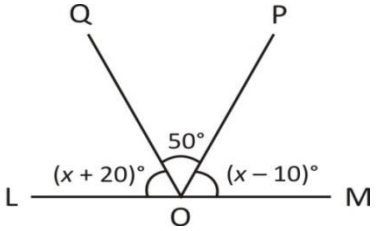
III. adjacent angles are complementary.

Which of the statements given above is/are correct?

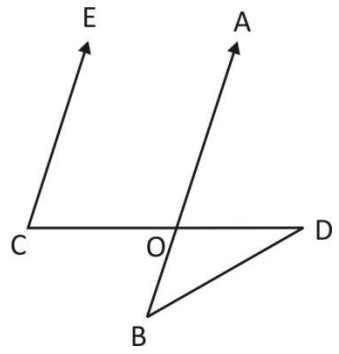
A. Only III B. Only I C. II and III D. II and III

9. In the figure given below LOM is a straight line. What is the value of x°?

A. 45°
B. 60°
C. 70°
D. 80°



10. In the figure given below, EC is parallel to AB, ∠ECD = 70° and ∠BDO = 20°. What is the value of ∠OBD?



A. 20°

B. 30°

C. 40°

D. 50°

Correct Answers:

1	2	3	4	5	6	7	8	9	10
D	C	C	C	A	C	D	B	B	D

Explanations:

1.

As per the given figure,

Through E draw EE' || AB || C D.

Then, ∠AEE' = 180° – ∠BAE = (180° – 128°) = 52°.

(Interior angles on the same side of the transversal are supplementary.)

Now, ∠E'EC = (144° – 52°) = 92°.

∠FCD = ∠E'EC = 92° (Corr. ∠s).

Hence, option D is correct.

2.

In the given figure,

PQ = QR and ∠PQR = 90° ⇒ ∠QPR = ∠QRP = 45°.

∴ ∠QRS = (45° + 20°) = 65°.

∴ θ = ∠QRS = 65° (alt. ∠s)

Hence, option C is correct.

3.

In the given figure,

Produce AB to meet CD at F.

∠BFD = ∠EDF = 120° (alt. ∠s)

∠BFC = (180° – 120°) = 60°.

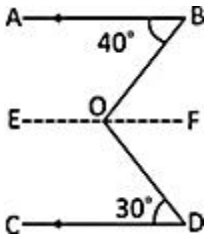
∠CBF = (180° – 100°) = 80°.

∴ ∠BCF = 180° – (60° + 80°) = 40°.

Hence, option C is correct.

4.

In the given figure,



Through O draw EOF parallel to AB & so to CD.

∴ ∠BOF = ∠ABO = 40° (alt. ∠s)

Similarly, ∠FOD = ∠CDO = 30° (alt. ∠s)

∴ ∠BOD = (40° + 30°) = 70°.

So, x = 70°.

Hence, option C is correct.

5.

As in the given figure,

∴∠FCD = ∠FBA = 45° (alt. ∠s)

∠FDC = 180° – (110° + 45°) = 25°

Hence, option A is correct

6.

As in the given figure,

∠ADB = 180° – (110° + 30°) = 40°.

So, ∠BDC = (75° – 40°) = 35°.

∴ ∠DBC = 180° – (60° + 35°) = 85°.

∴ ∠BCE = ∠DBC = 85° (alt. ∠s).

So, x = 85°.

Hence, option C is correct.

7.

Let the two angles are x and y. Therefore, as per the given information,

x – y = 44° and

x + y = 180° [As the total of supplementary angles is 180°]

On solving these two linear equations we get,

2x = 224,

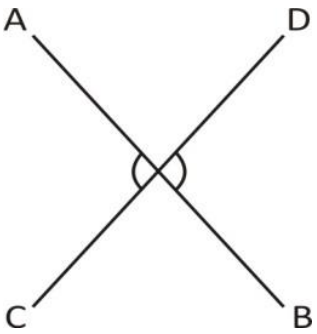
x = 112°.

Therefore the other angle y = 180° – 112° = 68°

Hence, option C is correct.

8.

Here, AB and CD are two lines.



If two straight lines intersect, then opposite vertically angles are equal.

Hence, option B is correct.

9.

From the given figure,

$\angle LOQ + \angle QOP + \angle POM = 180°$ (straight line)

$\therefore$ $(x° + 20°) + 50° + (x° – 10°) = 180°$

$\Rightarrow$ $2x° + 60° = 180° \Rightarrow 2x° = 120°$

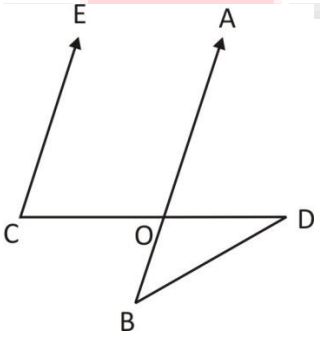
$\therefore$ $x° = 60°$

Hence, optuion B is correct.

10.

Given that, EC || AB

$\therefore$ $\angle ECO + \angle AOC = 180°$



$\Rightarrow$ $\angle AOC = 180° – 70° = 110°$

$\therefore$ $\angle BOD = \angle AOC = 110°$ (alternate angle)

Now, in ΔOBD

$\angle BOD + \angle ODB + \angle DBO = 180°$

$\therefore$ $110° + 20° + x° = 180° \Rightarrow x° = 50°$.

Hence, option D is correct.