1. $3x + y = 19$, and $x + 3y = 1$.
Find the value of $2x + 2y$

- A. 20
- B. 18
- C. 11
- D. 10
- E. 5

2. The price of a cycle is reduced by 25 per cent. The new price is reduced by a further 20 per cent. The two reductions together are equal to a single reduction of

- A. 45%
- B. 40%
- C. 35%
- D. 32.5%
- E. 30%

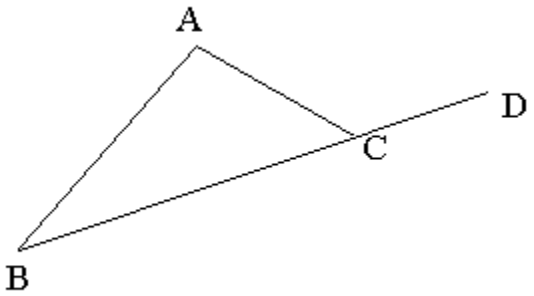
3. x and y are integers
$x + y < 11$, and $x > 6$
What is the smallest possible value of $x - y$?

- A. 1
- B. 2
- C. 4
- D. -2
- E. -4

4. If $x5y4z2 < 0$, which of the following **must** be true?

Select ALL such statements.

- A. $xy < 0$
- B. $yz < 0$
- C. $xz < 0$
- D. $x < 0$
- E. $x5 < 0$



(figure not to scale)

5. BCD is a line segment and Angle BAC = ¼ Angle ACB ; Angle ACD = ?

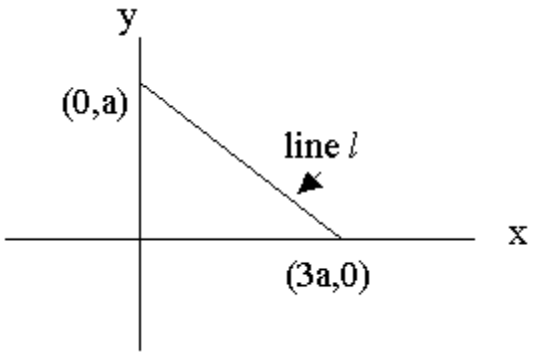
- A. 140
- B. 100
- C. 120
- D. 60
- E. it cannot be determined from the information given

6. If $x ¤ y = (x + y)^2 - (x - y)^2$
Then $\sqrt{5} ¤ \sqrt{5}$ =

- A. 0
- B. 5
- C. 10
- D. 15
- E. 20

7. In a certain village, m litres of water are required per household per month. At this rate, if there are n households in the village, how long (in months) will p litres of water last?

- A. p /mn
- B. mn / p
- C. mp / n
- D. np / m
- E. npm

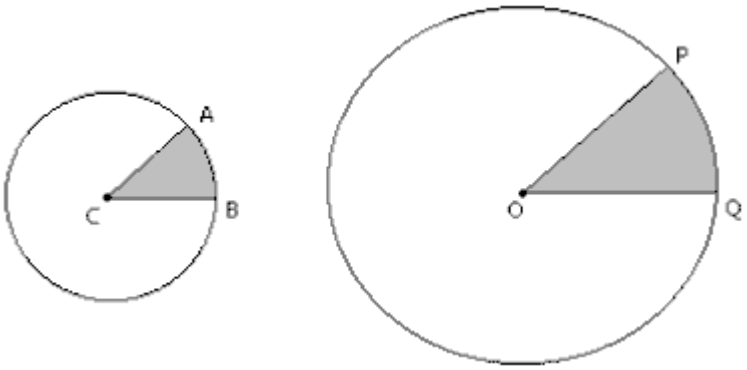


8. In the figure below, what is the slope of line l ?

- A. - 3
- B. - 1/3
- C. 0
- D. 1/3
- E. 3

9. What digit appears in the units place in the number obtained when 2320 is multiplied out?

- A. 0
- B. 2
- C. 4
- D. 6
- E. 8



10. Radius of circle center O is 3 times the radius of circle center C.
Angle ACB = Angle POQ

If the shaded area of circle C is 2 then what is the area of the shaded part of circle O ?

- A. 6
- B. 12
- C. 18

- D. 36
- E. 3/2

Answer Key

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