3. One side of a triangle has length 8 and a second side has length 5. Which of the following could be the area of the triangle?

I 24
II 20
III 5

- A. I only
- B. II only
- C. III only
- D. II and III only
- E. I, II and III

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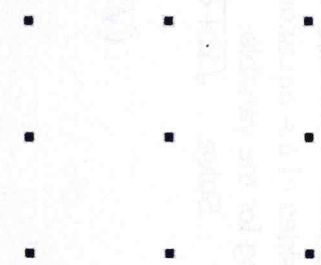
8. A dress on sale in a shop is marked at $D. During the discount sale its price is reduced by 15%. Staff are allowed a further 10% reduction on the discounted price. If a staff member buys the dres what will she have to pay in terms of D ?

- A. 0.75D
- B. 0.76D
- C. 0.765D
- D. 0.775D
- E. 0.805D

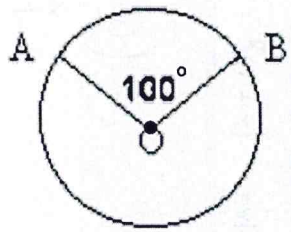
9. All the dots in the array are 2 units apart vertically and horizontally. What is the length of the longest line segment that can be drawn joining any two points in the array without passing through any other point ?

- A. 2
- B. $2\sqrt{2}$
- C. 3
- D. $\sqrt{10}$
- E. $\sqrt{20}$



10. If the radius of the circle with centre O is 7 and the measure of angle AOB is 100, what is the best approximation to the length of arc AB ?

- A. 9
- B. 10
- C. 11
- D. 12
- E. 13



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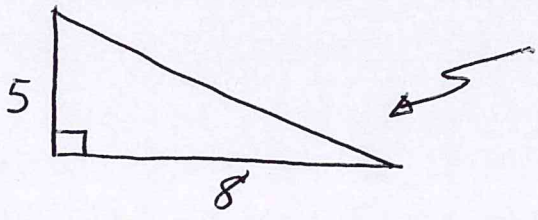
(3)



Area $= \frac{1}{2}(8)(5) = 20$

THIS IS THE MAXIMUM AREA.

THEREFORE AREA OF THIS Δ IS DEFINED BY : $0 < A \leq 20$

SO BOTH 20 & 5 ARE POSSIBLE
II III

D

---

(8) ORIGINAL PRICE $\$D$

SALE PRICE AFTER 15% MARKDOWN $= .85D$

PRICE AFTER FURTHER 10% DISCOUNT $= .90(.85D)$

$= .765D$

C

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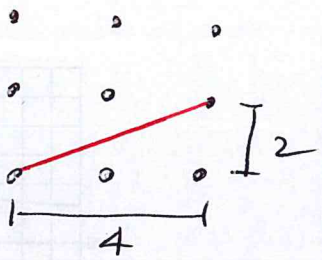
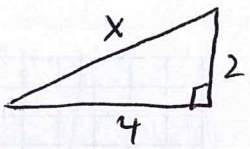
(9)





$x^2 = 4^2 + 2^2$

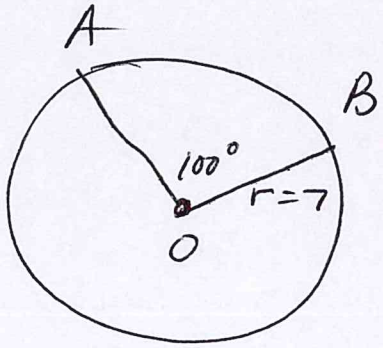
$x^2 = 16 + 4$

$x^2 = 20$

$x = \sqrt{20}$

E

(10)



circumference of circle O = $2\pi(7)$

$= 14\pi$

Length of arc $\overset{\frown}{AB}$ = $\frac{100^\circ}{360^\circ} = \frac{m\overset{\frown}{AB}}{14\pi}$

$m\overset{\frown}{AB} = 12.22$

D