

1. **Answer (C):** Susan pays $(4)(0.75)(20) = 60$ dollars. Pam pays $(5)(0.70)(20) = 70$ dollars, so she pays $70 - 60 = 10$ more dollars than Susan.
2. **Answer (D):** The brick has a volume of $40 \cdot 20 \cdot 10 = 8000$ cubic centimeters. Suppose that after the brick is placed in the tank, the water level rises by h centimeters. Then the additional volume occupied in the aquarium is $100 \cdot 40 \cdot h = 4000h$ cubic centimeters. Since this must be the same as the volume of the brick, we have

$$8000 = 4000h \quad \text{and} \quad h = 2 \text{ centimeters}$$

7. **Answer (C):** Let D be the difference between consecutive terms of the sequence. Then $a = c - 2D$, $b = c - D$, $d = c + D$, and $e = c + 2D$, so

$$a + b + c + d + e = (c - 2D) + (c - D) + c + (c + D) + (c + 2D) = 5c.$$

Thus $5c = 30$, so $c = 6$.

To see that the values of the other terms cannot be found, note that the sequences 4, 5, 6, 7, 8 and 10, 8, 6, 4, 2 both satisfy the given conditions.

8. **Answer (C):** Consider the two chords with an endpoint at 5. The arc subtended by the angle determined by these chords ext