

6. Which of the following are correct calculations for difference quotient of:

$$s(j) = 7j^2 + 6j + 4$$

$$s(j) = 7j^2 + 6j + 4$$

$$s(j+h) = 7(h+j)^2 + 6(h+j) + 4$$

$$= 7h^2 + 14hj + 6h + 7j^2 + 6j + 4$$

$$\frac{s(j+h)-s(j)}{h} = \frac{(7h^2+14jh+6h+7j^2+6j+4)-(7(j+1)^2+6(j+1)+4)}{h}$$

$$= \frac{7h^2+14jh+6h}{h}$$

$$= \frac{h(7h+14j+6)}{h}$$

$$= 7h + 14j + 6$$

$$s(j) = 7j^2 + 6j + 4$$

$$s(j+h) = 7(h+j)^2 + 6(h+j) + 4$$

$$= 7h^2 + 14hj + 20h + 7j^2 + 20j + 17$$

$$\frac{s(j+h)-s(j)}{h} = \frac{(7h^2+14jh+20h+7j^2+20j+17)-(7j^2+6j+4)}{h}$$

$$= \frac{7h^2+14jh+6h}{h}$$

$$= \frac{h(7h+14j+6)}{h}$$

$$= 7h + 14j + 6$$

$$s(j) = 7j^2 + 6j + 4$$

$$s(j+h) = 7(h+j)^2 + 6(h+j) + 4$$

$$= 7h^2 + 14hj + 6h + 7j^2 + 6j + 4$$

$$\frac{s(j+h)-s(j)}{h} = \frac{(7h^2+14jh+6h+7j^2+6j+4)-(7j^2+6j+4)}{h}$$

$$= \frac{7h^2+14jh+6h}{h}$$

$$= \frac{h(7h+14j+6)}{h}$$

$$= 7h + 14j + 6$$

$$s(j) = 7j^2 + 6j + 4$$

$$s(j+h) = 7(h+j)^2 + 6(h+j) + 4$$

$$= 7h^2 + 14hj - 8h + 7j^2 - 8j + 5$$

$$\frac{s(j+h)-s(j)}{h} = \frac{(7h^2+14jh+34h+7j^2+34j+44)-(7j^2+6j+4)}{h}$$

$$= \frac{7h^2+14jh+6h}{h}$$

$$= \frac{h(7h+14(j+1)+6)}{h}$$

$$= 7h + 14j + 6$$

**Solution**