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

$$d(f) = 2f^2 + 2f + 7$$

$$d(f) = 2f^2 + 2f + 7$$
$$d(f+h) = 2(f+h)^2 + 2(f+h) + 7$$
$$= 2f^2 + 4fh + 2f + 2h^2 + 2h + 7$$
$$\frac{d(f+h) - d(f)}{h} = \frac{\left(2f^2 + 4hf + 2f + 2h^2 + 2h + 7\right) - \left(2(f+1)^2 + 2(f+1) + 7\right)}{h}$$
$$= \frac{2h^2 + 4fh + 2h}{h}$$
$$= \frac{h(4f + 2h + 2)}{h}$$
$$= 4f + 2h + 2$$

$$d(f) = 2f^2 + 2f + 7$$
$$d(f+h) = 2(f+h)^2 + 2(f+h) + 7$$
$$= 2f^2 + 4fh + 6f + 2h^2 + 6h + 11$$
$$\frac{d(f+h) - d(f)}{h} = \frac{\left(2f^2 + 4hf + 6f + 2h^2 + 6h + 11\right) - \left(2f^2 + 2f + 7\right)}{h}$$
$$= \frac{2h^2 + 4fh + 2h}{h}$$
$$= \frac{h(4f + 2h + 2)}{h}$$
$$= 4f + 2h + 2$$

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$$d(f+h) = 2(f+h)^2 + 2(f+h) + 7$$
$$= 2f^2 + 4fh + 2f + 2h^2 + 2h + 7$$
$$\frac{d(f+h) - d(f)}{h} = \frac{\left(2f^2 + 4hf + 2f + 2h^2 + 2h + 7\right) - \left(2f^2 + 2f + 7\right)}{h}$$
$$= \frac{2h^2 + 4fh + 2h}{h}$$
$$= \frac{h(4f + 2h + 2)}{h}$$
$$= 4f + 2h + 2$$

$$d(f) = 2f^2 + 2f + 7$$
$$d(f+h) = 2(f+h)^2 + 2(f+h) + 7$$
$$= 2f^2 + 4fh - 2f + 2h^2 - 2h + 7$$
$$\frac{d(f+h) - d(f)}{h} = \frac{\left(2f^2 + 4hf + 10f + 2h^2 + 10h + 19\right) - \left(2f^2 + 2f + 7\right)}{h}$$
$$= \frac{2h^2 + 4fh + 2h}{h}$$
$$= \frac{h(4(f+1) + 2h + 2)}{h}$$
$$= 4f + 2h + 2$$

Solution