Expression for v

Combining the results from Question #s 1 and 2 above, the expression for the linear velocity of the object at the bottom of the incline is:

a.)
$$v = \sqrt{2gh}$$

b.)
$$v = \sqrt{2mghr/I}$$

$$c.) v = \sqrt{\frac{gh}{1 + \left(I/mr^2\right)}}$$

d.)
$$v = \sqrt{\frac{4mr^2gh}{\left(2I + mr^2\right)}}$$

$$e.) v = \sqrt{\frac{2gh}{1 + \left(I/mr^2\right)}}$$