test corrections

1. The correct answer is 3 because
based on the trig functions: $\cos\theta = \dfrac{adj}{hyp}$     $+\frac{1}{3}$

$$\cos 40 = \frac{12}{1} \quad X$$

$X\cos 40 = 12$    $\dfrac{X\cos 40}{\cos 40} = \dfrac{12}{\cos 40}$    $X = \boxed{15.7 \text{ m/s}}$

2. 3 is the correct answer because when
using the equation $V_f{}^2 = V_i{}^2 + 2ad$
the final velocity will always be the same as     $+\frac{1}{3}$
the initial velocity

3. 1 is the correct answer because
$V_f{}^2 = V_i{}^2 + 2ad$
$V_f{}^2 = 0^2 + 2 \cdot 9.8 h$     $\sqrt{V_f}$ to get answer

$+\frac{1}{3}$

6. 1 is the correct answer because when using
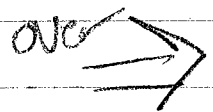the equation
$d = V_i t + \frac{1}{2} at^2$
$50 = 0(t) + \frac{1}{2}(9.8)(t)$
$\dfrac{50}{4.9} = \dfrac{4.9 t^2}{4.9}$    $\sqrt{t^2} = \sqrt{10.2}$
$\boxed{t = 3.19 \text{ s}}$     $+\frac{1}{3}$

| X | Y |
|---|---|
| | $d = 50$ |
| | $a = 9.8$ |
| | $V_i = 0$ |

over →

7. 1 is the correct answer because with
air friction the path will be shorter as well     $+\frac{1}{3}$
as lower because the gravity pulls it down, and
air friction pushes on the projectile when it is in the air.

$t = 3.06 s$     $0 = 15t - 4.9t^2$

8. The correct answer is 4 because 80 (4.00) is larger than any of the other initial horizontal speeds × time

$$+\frac{1}{3}$$