Factor Completely

1. $x^2 - 4x - 45$

2. $2p^2 - 12p - 32$

3. $3m^2 + 16m + 5$

4. $10a^2 + 5a - 225$

5. $r^2 - 144$

6. $45x^2 - 20$

7. $9b^2 + 24b + 16$

8. $-18x^2 + 60x - 50$

9. $2x^3 + 3x^2 - 8x - 12$

10. $25n^3 - 35n^2 - 5n + 7$

Use the projectile motion formula to answer the following questions. $h = -16t^2 + vt + s$

11. A ball is kicked up into the air at 8 meters/second from a cliff 80 meters high. How long will it take for the ball to strike the ground?

12. Wile E. Coyote wants to drop an anvil on top of the head of the Roadrunner. He is currently on a cliff 144 feet above the road. How long will it take for the anvil to fall and hit the Road Runner?