

1. Solve $\frac{1}{2}(8y-6) < -\frac{1}{4}(4y-8)$

A. $y < -1$

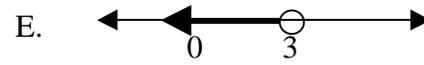
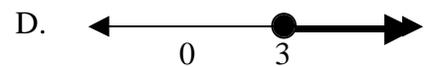
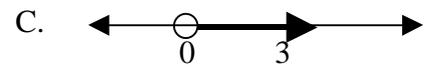
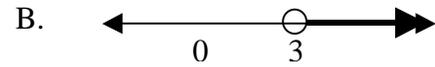
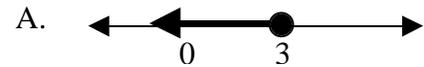
B. $y < -\frac{1}{3}$

C. $y < -\frac{2}{5}$

D. $y < 1$

E. $y < -\frac{14}{3}$

2. Graph the inequality $t > 3$.



3. Solve $|3x+2|-6=17$

A. $\left\{-\frac{25}{3}, 7\right\}$

B. $\{3\}$

C. $\{7\}$

D. $\left\{-\frac{13}{3}, 7\right\}$

E. $\left\{-\frac{13}{3}, 3\right\}$

4. In order to solve, $|x + 6| \leq 5$ can be written as:

A. $x + 6 \geq -5$ or $x + 6 \geq 5$

B. $x + 6 \leq -5$ or $x + 6 \leq 5$

C. $-5 \leq x + 6 \leq 5$

D. $x + 6 \geq -5$ or $x + 6 \leq 5$

E. $-5 \geq x + 6 \geq 5$

5. A ball is tossed vertically upward and its height, in feet, after t seconds is given by the function $h(t) = 80t - 16t^2$. What is the height of the ball after 3 seconds?

A. 144 feet

B. 96 feet

C. 192 feet

D. 93 feet

E. None of these.

6. Total profit is defined as total revenue minus total cost. $R(x)$ and $C(x)$ are the total revenue and total cost from the sale of x computers. Set up the total profit function, $P(x)$, and simplify.

$$C(x) = 600 + 0.72x^2$$

$$R(x) = 300x - 0.3x^2$$

A. $P(x) = 0.42x^2 + 300x - 600$

B. $P(x) = 0.69x^2 + 300x + 600$

C. $P(x) = -1.02x^2 + 300x + 600$

D. $P(x) = 0.42x^2 - 300x + 600$

E. $P(x) = -1.02x^2 + 300x - 600$

7. Multiply. $(y-2)(y^2+4y-5)$

- A. y^3+2y^2+3y-5
- B. y^3+4y-7
- C. $y^3+2y^2-13y-10$
- D. $y^3+4y+10$
- E. $y^3+2y^2-13y+10$

8. Multiply. $(6n-p)^2$

- A. $36n^2-p^2$
- B. $36n^2-12np+p^2$
- C. $12n^2-p^2$
- D. $36n^2+p^2$
- E. $36n^2-6np+p^2$

9. One factor of $15a^2y-3ay^2$ is $3ay$. The other factor is:

- A. $5a^2-3y^2$
- B. $15a^2y-y$
- C. $12a-y$
- D. $5a-y^2$
- E. $5a-y$

10. Factor completely $75y^2 - 27z^2$

- A. $3(25y+9z)(y-z)$
- B. $25(y^2-2z^2)$
- C. $3(5y-3z)(5y+3z)$
- D. $5(5y-9z)(5y+3z)$
- E. $3(5y-3z)^2$

11. One factor of $3x^2 - 17x - 6$ is:

- A. $x+6$
- B. $3x+1$
- C. $3x-6$
- D. $x-6$
- E. $3x-1$

12. Solve $m^2 + 44 + 15m = 0$

- A. $\{-11, -4\}$
- B. $\{4, 11\}$
- C. $\{1, 15\}$
- D. $\{-11, 4\}$
- E. $\{-15, -1\}$

13. Three positive, consecutive odd integers are such that the square of the first plus the sum of the second and third is 105. Find the first integer.

- A. 35
- B. 11
- C. 7
- D. 33
- E. 9

14. Multiply. $\frac{6t-18}{t^2-2t-3} \cdot \frac{t^2+4t+3}{3}$

- A. $4t+9$
- B. $4t+3$
- C. $6(t-3)$
- D. $2(t+3)$
- E. $\frac{2(t-3)(t+1)}{t-1}$

15. Subtract and simplify. $\frac{a}{a-2} - \frac{4}{a+3}$

- A. $\frac{a^2+7a-8}{(a-2)(a+3)}$
- B. $\frac{a^2-6a-12}{(a-2)(a+3)}$
- C. $\frac{a^2-a+8}{(a-2)(a+3)}$
- D. $\frac{a-4}{(a-2)(a+3)}$
- E. $\frac{a^2-a-8}{(a-2)(a+3)}$