Answers

1. $3y - 4x + 17 = 0$

2. $f^{-1}(x) = \frac{7-2x}{3}$

3. (a) $U_1 = 12$ (b) $L = -20$

4. (a) $h(x) = \frac{3}{(2x-1)^2}$ (b) $x \neq \frac{1}{2}$

5. (a) $p = -5, q = -4$ (b) $x = 3, x = \frac{1}{2}, x = -1$

6. max TP @ $x = 0$, min TP @ $x = \frac{4}{3}$

7. (a) Proof (b) $-\frac{5}{4}$

8. (a) $P(-6, -4)$ (b) $(x + 7)^2 + (y + 6)^2 = 5$

9. 8

10. $\frac{21}{29}$

11. $y = 2x^3 - 5x + 3$

12. $p < -2$ and $p > 3$

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Answers

1. (a) $3y = x - 12$ (b) $y = 2x - 9$ (c) $(3, -3)$

2. (a) POI @ $(0,0)$ Max TP @ $(3,2)$ (b) roots @ 0 and 3

3. $2y + x - 2 = 0$

4. (a) $m = 1.03, c = -400$ (b) July, £114.98

5. 32 units²

6. $x = 14.5°\&165.5°$

7. $x = 3$

8. (a) $4i + 9j - 5k$ (b) proof (c) 12.2°

9. (a) Proof (b) $r = 3.17cm$

10. (a) 215 (b) 9.26 hours or 9 hours 16 minutes

11. $a = 64, b = 2$

12. (a) $\sqrt{7}\cos(x - 0.857)$ (b) $t = 1.5$

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