

**Answer List**

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|--|------------------------------------|
| 1. $\sqrt{3}$  | 2. $y > -8$                        |
| 3. 12  | 4. $y = -\frac{1}{3}x - 3$         |
| 5. infinite number of solutions                      | 6. $97\frac{1}{2}$                 |
| 7. $\frac{1}{2}, \frac{3}{2}$                        | 8. $-7, 6$                         |
| 9. $y \leq -\frac{3}{4}x$ and $y < \frac{3}{4}x - 6$ | 10. 20                             |
| 11. $\frac{3x + 1}{2x - 8}$                          | 12. 3.8 seconds                    |
| 13. $x < -\frac{3}{2}$ or $x > 6$                    | 14. 8                              |
| 15. $(3xy - 2)(xy + 5)$                              | 16. 54 cm                          |
| 17. $120^\circ$                                      | 18. $306 \text{ (units}^2\text{)}$ |
| 19. $80\sqrt{3} \text{ cm}^3$                        | 20. 260                            |
| 21. $132.665 \text{ (cm}^2\text{)}$                  | 22. $(3, -4)$                      |
| 23. $65^\circ$                                       | 24. 4                              |
| 25. 40   | 26. $(-\frac{1}{2}, \frac{1}{2})$  |
| 27. 16 units   | 28. $8\sqrt{2}$                    |
| 29. $24 \text{ units}^3$                             | 30. $\frac{3}{5}$                  |

**Catalog List**

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|----------------|---------------|---------------|
| 1. CA1 CB 35   | 2. ALG OB 39  | 3. CA1 CE 18  |
| 4. ALG PH 45   | 5. MMA IG 37  | 6. MCC BF 2   |
| 7. ALG ND 44   | 8. NC3 ID 5   | 9. ALG PM 8   |
| 10. CA1 CO 23  | 11. MMA HB 46 | 12. CA1 CW 1  |
| 13. ALG OE 111 | 14. CM2 DG 47 | 15. CM2 FA 67 |
| 16. GEO DD 7   | 17. TX7 CA 26 | 18. MCC CE 65 |
| 19. MMA OC 17  | 20. MMA OB 15 | 21. MCC CL 9  |
| 22. TX7 CO 1   | 23. MMA KF 35 | 24. CM2 IC 44 |
| 25. CM2 IA 29  | 26. GEO LD 22 | 27. GEO EE 19 |
| 28. MMA LJ 9   | 29. GEO KD 21 | 30. CM2 JA 35 |

**Answer List**

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| <p>1. 85</p> <p>3. <math>\frac{1}{10000}</math></p> <p>5. <math>(x - 2)^2 + (y - 2)^2 = 8</math></p> <p>7. 294</p> <p>9. 10 cm by 18 cm</p> <p>11. 0.6</p> <p>13. <math>2 \sec^2 \theta</math></p> <p>15. <math>y = 9 \sin\left(\frac{\pi x}{2}\right)</math></p> <p>17. <math>\frac{1 - \cos 4x}{2}</math></p> <p>19. 667 km</p> <p>21. (3, -1); (3, 1)</p> <p>23. <math>x = -\frac{3}{2}</math> or <math>x = 4</math></p> <p>25. <math>2\sqrt{30}</math></p> <p>27. 75</p> <p>29. <math>30^\circ, 150^\circ</math></p> | <p>2. <math>t^2 + 5t - 4</math></p> <p>4. 12, -3</p> <p>6. 24 (ways)</p> <p>8. <math>-\frac{3}{4}</math></p> <p>10. 120</p> <p>12. <math>4\sqrt{3}</math></p> <p>14. <math>\frac{7\sqrt{2}}{2}</math></p> <p>16. 3955 ft</p> <p>18. <math>104 - 182i</math></p> <p>20. <math>\approx 44.35</math> cm</p> <p>22. <math>\frac{x^2}{55^2} + \frac{y^2}{25^2} = 1</math></p> <p>24. <math>x = 0, x = 4,</math> and <math>y = 0</math></p> <p>26. 5</p> <p>28. <math>\frac{4}{x + 3}</math></p> <p>30. <math>p = 3, q = 2</math></p> |
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**Catalog List**

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|--|---|--|
| <p>1. ALG QE 12</p> <p>4. ALG NC 26</p> <p>7. TRI LG 15</p> <p>10. TX7 EA 18</p> <p>13. CM1 IH 13</p> <p>16. MMA LL 12</p> <p>19. CM1 HD 29</p> <p>22. TRI JL 37</p> <p>25. MCC EE 2</p> <p>28. APC BC 4</p> | <p>2. CM1 PA 23</p> <p>5. CM1 EE 14</p> <p>8. CM1 OA 59</p> <p>11. CM1 IA 37</p> <p>14. TRI OH 19</p> <p>17. APC AC 13</p> <p>20. TRI NI 16</p> <p>23. CM1 CE 7</p> <p>26. TRI GD 13</p> <p>29. CM1 GD 17</p> | <p>3. CM1 BE 11</p> <p>6. MCC EC 49</p> <p>9. NC3 ID 9</p> <p>12. CM2 JD 15</p> <p>15. TRI PD 31</p> <p>18. TRI CF 27</p> <p>21. TRI JK 4</p> <p>24. APC BF 13</p> <p>27. CM1 QH 62</p> <p>30. TRI CH 35</p> |
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**Answer List**

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| 1. $-\frac{1}{6}$<br>3. $-\frac{2}{27}$<br>5. $\frac{3}{4}$<br>7. $\frac{1}{3}$<br>9. $\frac{(3-5y)}{5x-2y}$<br>11. $5\sqrt{2}$ ft/s<br>13. $x^3 - 4x + 3$<br>15. $\frac{1}{21}(x^3 + 5)^7 + C$<br>17. 0<br>19. diverges<br>21. $\frac{1}{12} \sin^4(3x) + C$<br>23. 1800<br>25. $(-\infty, -1)$ or $(6, \infty)$<br>27. 389<br>29. $\int_{-3}^3 (9 - x^2) dx$ | 2. $-4, -1$<br>4. $10\sqrt{2} \times 20\sqrt{2}$<br>6. $\frac{132}{(2x+1)^4}$<br>8. $-\infty$<br>10. $x > -2$<br>12. $\sqrt{2} + 1$<br>14. 4.5<br>16. D and E<br>18. 5<br>20. $\frac{1}{8} \arctan \frac{x^2}{4} + C$<br>22. $\frac{x^2(7x+6)}{2\sqrt{x+1}}$<br>24. $s = 21t^2 - 18t + 3$<br>26. $\frac{4\pi}{3}$<br>28. 2<br>30. 4.64 |
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**Catalog List**

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|---|--|---|
| 1. APC CC 22<br>4. CM1 RH 19<br>7. CM1 RC 22<br>10. CM1 RE 19<br>13. APC FI 3<br>16. CM1 RF 21<br>19. APC FO 9<br>22. APC EF 9<br>25. APC AA 10<br>28. APC DG 7 | 2. APC CF 2<br>5. CM1 RF 26<br>8. APC CD 18<br>11. APC EJ 15<br>14. APC FG 8<br>17. CM1 RA 24<br>20. APC FF 33<br>23. CM1 RH 7<br>26. APC GE 3<br>29. APC GB 5 | 3. CM1 RD 50<br>6. APC ED 13<br>9. APC EG 4<br>12. APC IC 21<br>15. APC FE 1<br>18. APC DM 24<br>21. APC FE 15<br>24. APC GC 28<br>27. APC DB 12<br>30. APC GF 16 |
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