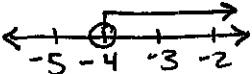
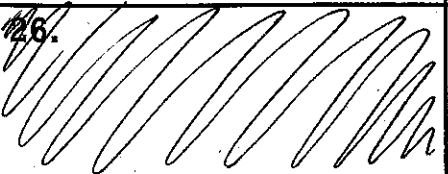
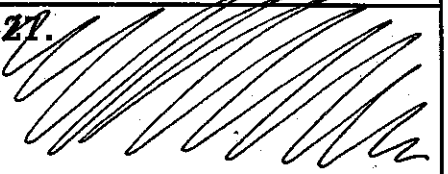
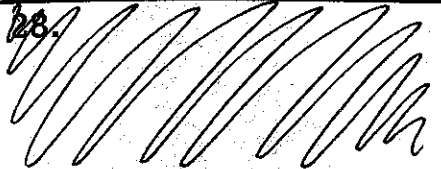
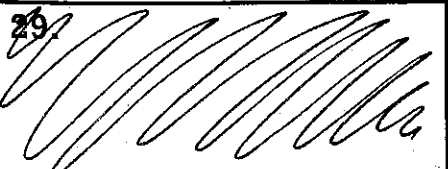

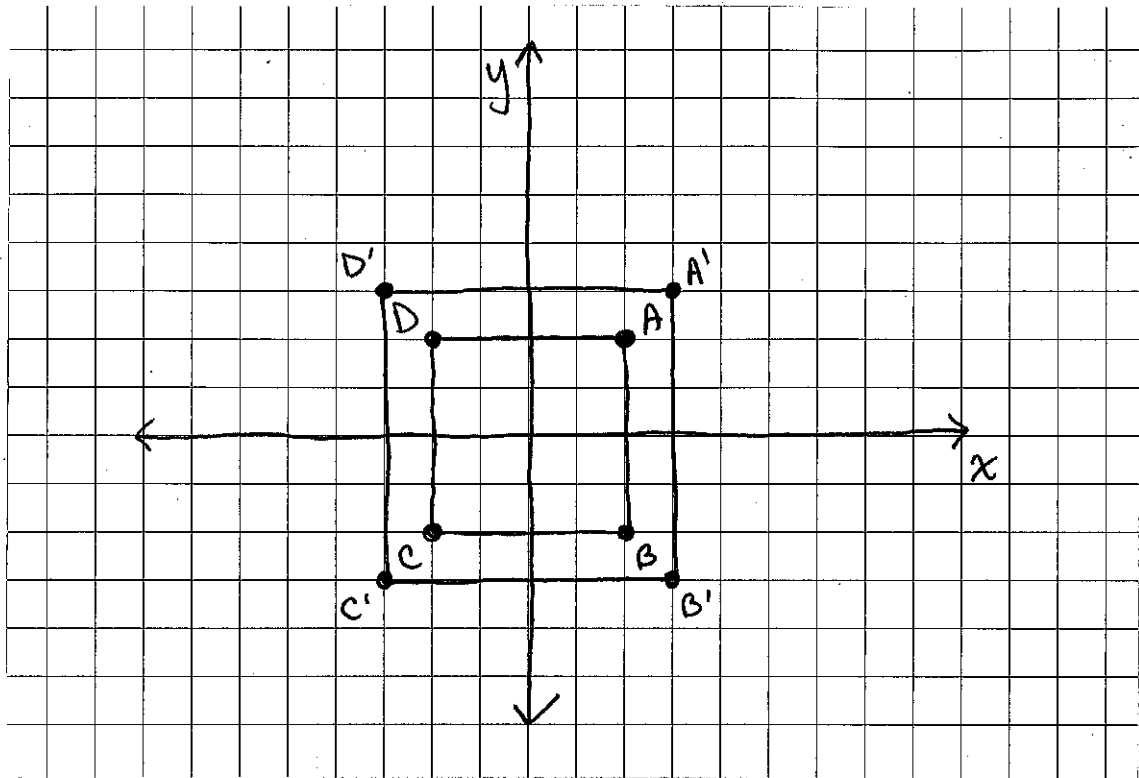

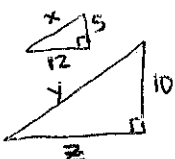
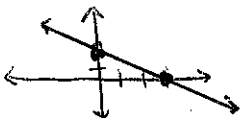
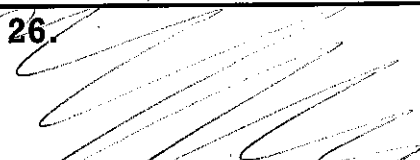
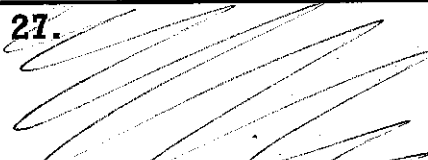
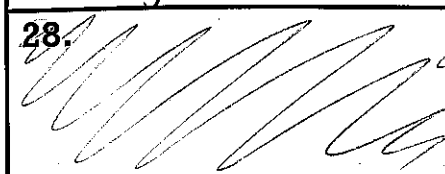
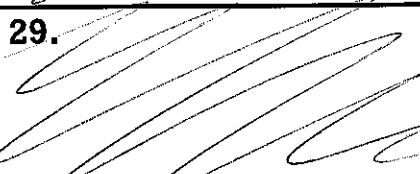
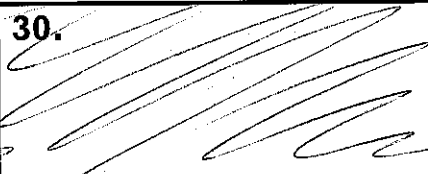
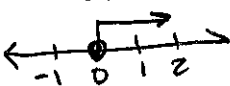
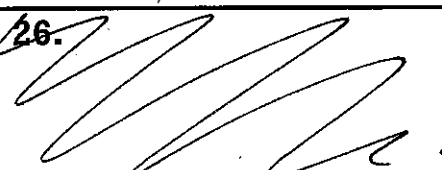
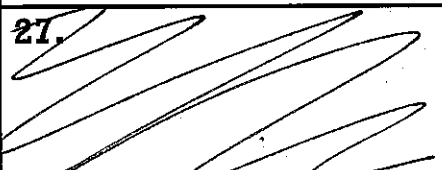
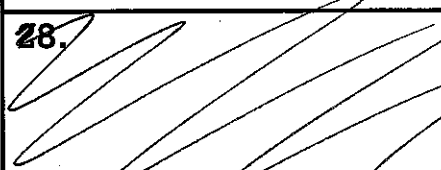




1. 69 runners	2. 75 crates	3. (see graph on back)
4. a. 16 units, 24 units b. yes. $16 \times 1.5 = 24$ c. 16 units^2 , 36 units^2 d. scale factor squared $(1.5)^2$	5. a. 60° b. 2 in. c. 6 in^2	6. $3d^2 + 12d$
7. $5\sqrt{2}$	8. $10\sqrt{5}$	9. $\frac{5x^3}{3m^2}$
10. 10	11. $x > -4$ 	12. $y = 2x - 5$
13. yes. $1^2 + (\sqrt{3})^2 = 2^2$ Fits the Pythagorean Theorem $1 + 3 = 4 \checkmark$	14. $\frac{\$45}{\text{hr.}} \left(\frac{1 \text{ hr.}}{60 \text{ min.}} \right) \left(\frac{100\text{¢}}{\$1} \right) = \frac{75\text{¢}}{\text{min}}$	15. Yes; constant of variation is 2.5. The price is \$2.50 per item.
16. a. $0.\overline{26}$ b. $26.\overline{6}\%$ or $26\frac{2}{3}\%$ c. $\frac{1}{4}$	17. 25 cm^2	18. 42 ft^3
19. $a = 8$ $b = 34$ $c = 30$	20. $m = 2$	21. $x = 2\frac{1}{2}$ or 2.5
22. a. $5x(2x - 3)$ b. $20x + 15$	23. $1 \text{ ft } 7\frac{1}{2} \text{ in.}$	24. B.
25. a. apple, orange, grape, Cranberry, other b. 25%	26. 	27. 
28. 	29. 	30. 

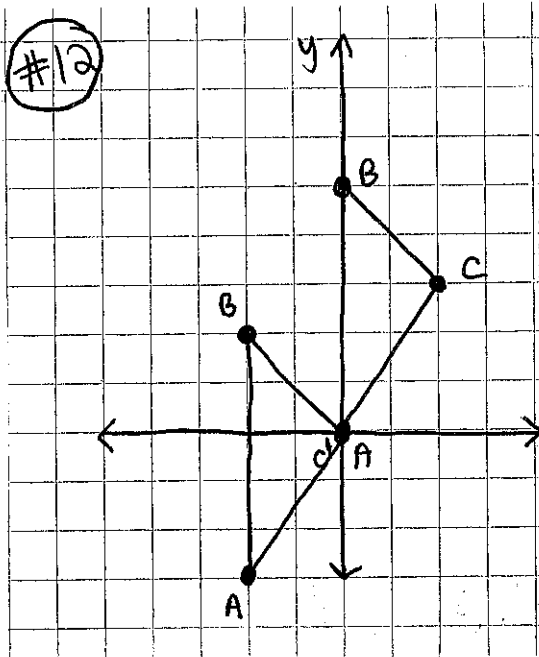
#3



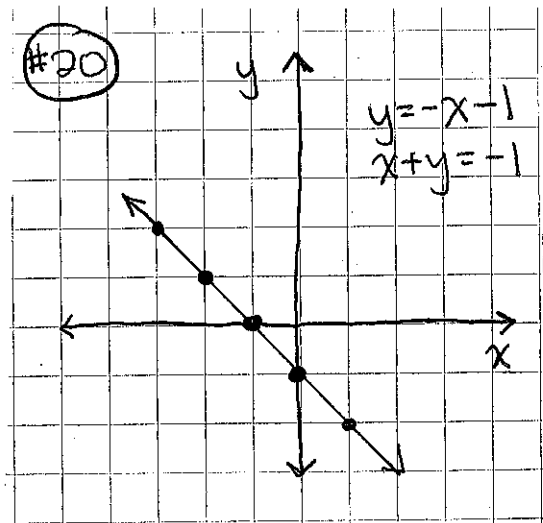
<p>1. 4%</p>	<p>2. 10ft</p>	<p>3. $1\frac{1}{2}$ ft tall object would have a $2\frac{1}{2}$ ft long shadow.</p>
<p>4. $90\pi\text{cm}^3$</p> 	<p>5. $x=13\text{cm}$ $y=26\text{cm}$ $z=24\text{cm}$</p> 	<p>6. a. 2 b. $30\text{cm}^2, 120\text{cm}^2$ c. 4</p>
<p>7. a. 72° b. 9.42 in</p>	<p>8. (0,2) (3,0)</p> 	<p>9. 77 books</p>
<p>10. $9\sqrt{3}$</p>	<p>11. $2\sqrt{11}$</p>	<p>12. $\frac{m}{2x}$</p>
<p>13. $\frac{1}{4}$</p>	<p>14. 150mm^2; less than 2cm^2</p>	<p>15. yes, the side lengths fit the Pythagorean Theorem $2^2+2^2=(2\sqrt{2})^2$ $4+4=4\cdot 2$ $8=8$</p>
<p>16. 2 gallons/hr.</p>	<p>17. a. $1.1\bar{6}$ b. $116\frac{2}{3}\%$ c. $1.16\bar{7}$</p>	<p>18. $S = \frac{A}{\pi r}$</p>
<p>19. a. ABC, ACB, BAC, BCA, CAB, CBA b. $\frac{1}{6}$</p>	<p>20. 36m^2</p>	<p>21. $-3(x^2+3x+14)$</p>
<p>22. $W = \frac{8}{3} = 2\frac{2}{3}$</p>	<p>23. $m=5$</p>	<p>24. x^2+2x+5 x^2+x-1 sum: $2x^2+3x+4$</p>
<p>25. A. yes, proportional. *8/hour. linear and passes through (0,0)</p>	<p>26. </p>	<p>27. </p>
<p>28. </p>	<p>29. </p>	<p>30. </p>


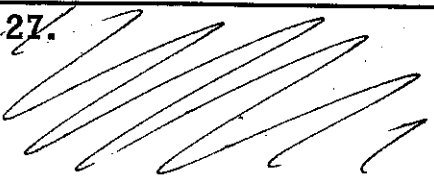
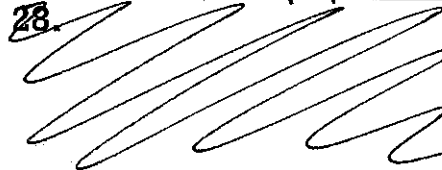

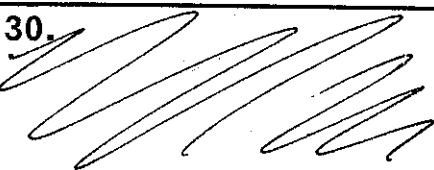
<p>1. 255 calories</p>	<p>★ 2. 60 miles; 4 hours; 15 mph Didn't spend equal time at the two speeds</p>	<p>3. 24%</p>
<p>★ 4. a. 90° b. 5 in or about 13.7 in.</p>	<p>★ 5. 13 cm²</p>	<p>★ 6. a. 27 ft³ b. 1 yd³</p>
<p>7. x = 175m y = 300m $\frac{2}{3}$</p>	<p>★ 8. x ≥ 0 </p>	<p>★ 9. Yes, side lengths fit the Pythagorean Theorem $1^2 + 2^2 = (\sqrt{5})^2$ $1 + 4 = 5 \checkmark$</p>
<p>★ 10. A.</p>	<p>11. $484 \text{ yd}^2 \left(\frac{3 \text{ ft}}{1 \text{ yd}}\right) \left(\frac{3 \text{ ft}}{1 \text{ yd}}\right) =$ <u>43560 ft²</u></p>	<p>★ 12. see graph on back</p>
<p>13. trapezoid 15 cm²</p>	<p>★ 14. $12\sqrt{3}$</p>	<p>15. 25</p>
<p>16. y</p>	<p>17. 6</p>	<p>★ 18. 254.34 cm³</p>
<p>★ 19. B.</p>	<p>★ 20. (see graph on back) graphs are identical b/c the equations are the same.</p>	<p>★ 21. 260°</p>
<p>22. x = 20</p>	<p>23. x = 1</p>	<p>★ 24. 3x + 3</p>
<p>25. a. about 6 million b. C</p>	<p>26. </p>	<p>27. </p>
<p>28. </p>	<p>29. </p>	<p>30. </p>

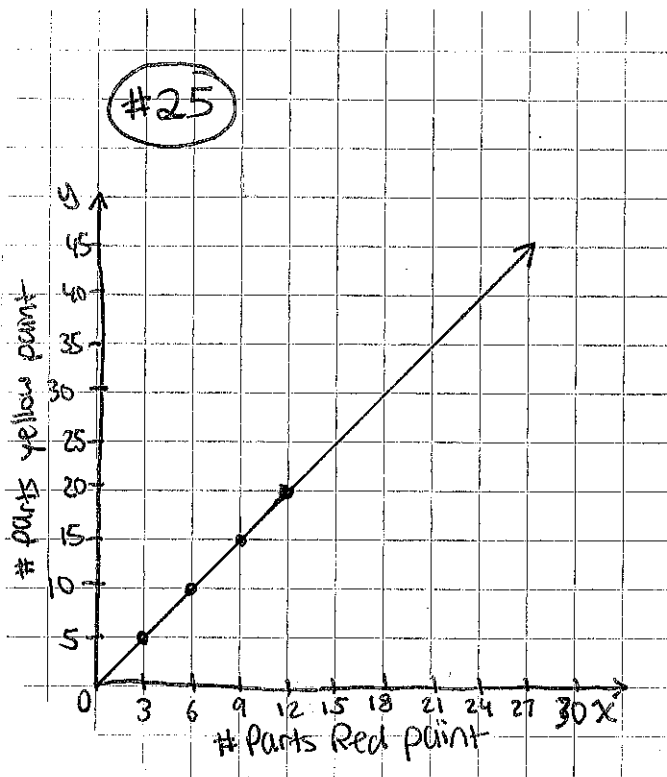
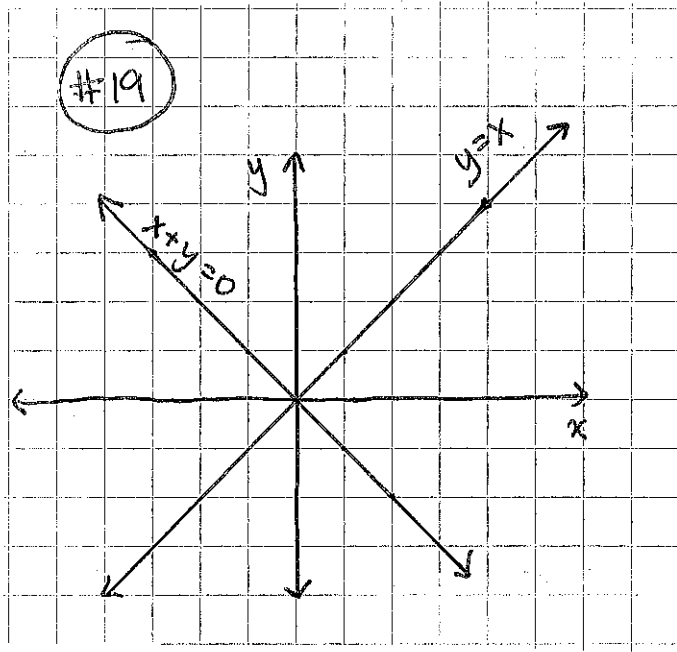
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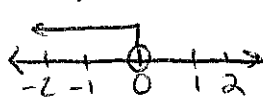
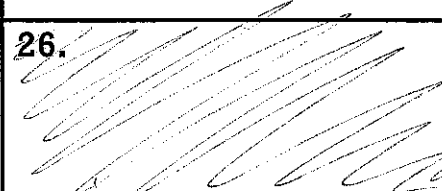
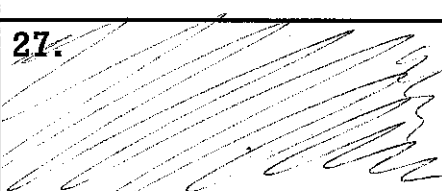
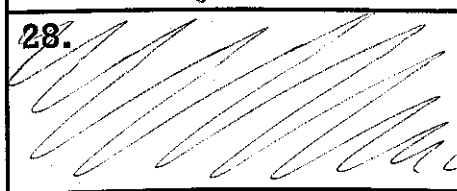
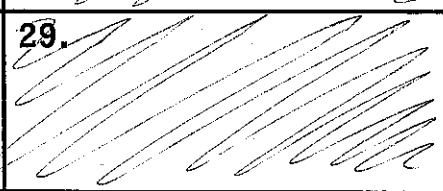
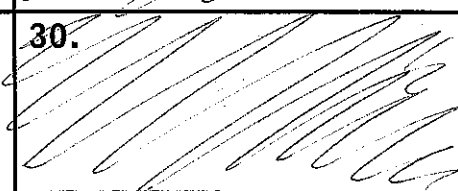


#20



1. 198 CDs	2. 40 free throws	3. \$20
★ 4. a. 120° b. about 10.5cm	★ 5. 36%	6. a. corresponding angles are equal b. $x=2, y=6$ c. 1.5
★ 7. D.	★ 8. trinomial 2nd degree $x^2 - 2x + 5$	★ 9. 6yd ² 54ft ²
10. $4\sqrt{3}$	11. $3x^2 + 2x$	12. $\frac{4x}{3y^3}$
★ 13. \$0.40	★ 14. a. right b. 12 square units	★ 15. a. $5\sqrt{2}$ units b. $12\sqrt{2}$ units.
16. a. $1.\bar{3}$ b. $133\frac{1}{3}\%$ or $133.\bar{3}\%$	17. a. $5/2$ b. 40°	18. 174 in ²
19. see graph on back	20. 199	21. $x=7$
22. $x=6$	23. $x = \frac{3}{4}$	24. $x = -50$
25. Proportional; $y = \frac{5}{3}x$ $5/3 \rightarrow$ constant of proportionality	graph on back	26. 
27. 	28. 	29. 
30. 		



1. 15 more pedestrians	2. a. 7.5 min. b. 8 miles per hour	3. 3,500,000 visitors (use $\frac{1}{6}$ because $16\frac{2}{3}\%$ is a repeating decimal)														
4. a. 36° b. 5π in or about 15.7 in.	5. 1×10^{-3}	6. a. $x=6$ $y=6$ b. $\angle F$ c. $\frac{3}{2}$ or 1.5														
7. It will fit at an angle (Pythagorean Theorem)	8. $4x+14$	9. $x < 0$ 														
10. 242 cm^2	11. $7x^2 - 35x$	12. $\frac{3}{10}$														
13. $10\sqrt{5}$	14. 20	15. a. 6 possible combinations b. $\frac{1}{6}$ <table border="1" data-bbox="1055 987 1347 1071"> <tr> <td>Red</td> <td>4</td> <td>5</td> <td>5</td> <td>6</td> <td>6</td> <td>6</td> </tr> <tr> <td>Green</td> <td>6</td> <td>5</td> <td>6</td> <td>4</td> <td>5</td> <td>6</td> </tr> </table>	Red	4	5	5	6	6	6	Green	6	5	6	4	5	6
Red	4	5	5	6	6	6										
Green	6	5	6	4	5	6										
16. C.	17. (use 2 unit multipliers) 2.5 mph	18. (2, 3) (see graph on back)														
19. 108 ft^2	20. scale: 1 in = 10 ft. $2\frac{1}{2}$ in.	21. $x=9$														
22. $x = \frac{3}{2}$ or $\frac{1}{2}$	23. $x = \frac{1}{10}$ or 0.1	24. $x = 5, -5$														
25. Reflection in the y-axis	26. 	27. 														
28. 	29. 	30. 														

line 1: $y = \frac{1}{2}x + 2$ line 2: $x + y = 5$ (#18)

