

Problem	Answer	Lesson
1. $550 \div 12$ is closest to what whole number? $45.8\bar{3}$	1. 46	Lesson 1 Lesson 12
2. $(-6) - (-3)(-5)$ $\begin{array}{r} -6 - 15 \\ -6 + (-15) \end{array}$	2. -21	Lesson 32 Lesson 36
3. Simplify: $5\frac{3}{4} - (3 - 1.75)$ $5.75 - 1.25$	3. 4.5	Lesson 13 Lesson 24
4. $(0.45)^2$ $\begin{array}{r} 0.45 \\ \times 0.45 \\ \hline \end{array}$	4. 0.2025	Lesson 15 Lesson 25
5. $6 \div 0.12$ equals: $\begin{array}{r} 50. \\ 12 \overline{)600.} \end{array}$	5. 50	Lesson 25
6. $\frac{5}{6} + \frac{3}{8} + 2\frac{1}{4}$ equals $\frac{20}{24} + \frac{9}{24} + \frac{54}{24} = \frac{83}{24} = 3\frac{11}{24}$	6. $3\frac{11}{24}$	Lesson 13
7. $\frac{2}{3} - (\frac{5}{6} - \frac{1}{4})$ equals $\frac{8}{12} - (\frac{10}{12} - \frac{3}{12})$ $\frac{8}{12} - \frac{7}{12} = \frac{1}{12}$	7. $\frac{1}{12}$	Lesson 13
8. $\frac{4}{5} \cdot 2\frac{3}{4} \cdot 10$ equals $\frac{4}{5} \cdot \frac{11}{4} \cdot \frac{10}{1} = \frac{22}{1}$	8. 22	Lesson 22 Lesson 23
9. $\frac{3}{5} \div (4\frac{1}{5} \div 3)$ equals $\frac{3}{5} \div (\frac{21}{5} \cdot \frac{1}{3}) \rightarrow \frac{3}{5} \div \frac{7}{5} \rightarrow \frac{3}{5} \cdot \frac{5}{7} =$	9. $\frac{3}{7}$	Lesson 22 Lesson 23
10. $\frac{8x^{-4}y^5}{4x^2y^1}$ reduces to $\frac{2y^4}{1x^4y^2}$	10. $\frac{2y^4}{x^6}$	Lesson 36 Lesson 51
11. $\sqrt{60}$ is between what two whole numbers? $\sqrt{49} = 7$ $\sqrt{64} = 8$	11. 7 and 8	Lesson 11
12. $(5 \times 10^{-4})(7 \times 10^{-2})$ equals 35×10^{-6}	12. 3.5×10^{-5}	Lesson 51 Lesson 57

$$12\text{m} \left(\frac{1.1\text{yds.}}{1\text{m}} \right) = 13.2\text{yds.}$$

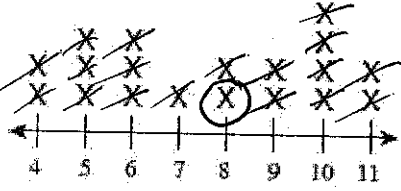
$$13.2\text{yds} \left(\frac{3\text{ft}}{1\text{yd.}} \right) = 39.6\text{ft.}$$




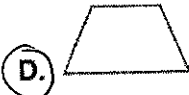
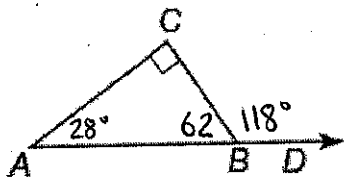
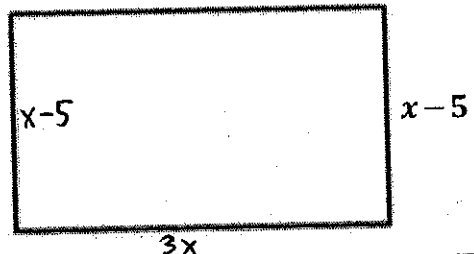
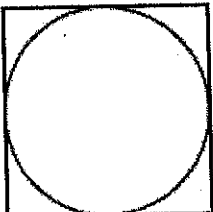
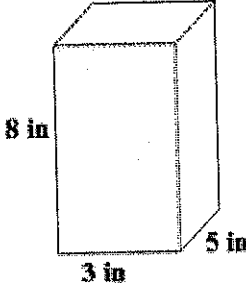
<p>13. A meter is about 1.1 yards. A classroom 12 meters long is about how many feet long?</p>	<p>13. (Rounds to) 40 ft.</p>	<p>Lesson 6 Lesson 25</p>
<p>14. The formula $f = 1.8c + 32$ may be used to convert temperatures from degrees Celsius to degrees Fahrenheit. Use the formula to convert -15°C to degrees Fahrenheit. $f = 1.8(-15) + 32$ $f = -27 + 32$</p>	<p>14. 5°F</p>	<p>Lesson 14 Lesson 36</p>
<p>15. What number is not equal to 0.25%?</p> <p>a. 0.0025 <input checked="" type="radio"/> b. $\frac{1}{4}$ c. $\frac{1}{400}$ <input checked="" type="radio"/> d. $\frac{25}{10000}$</p> <p>$\frac{1}{4}\% = \frac{1}{4} \div 100$ $= \frac{1}{4} \times \frac{1}{100} = \frac{1}{400}$</p> <p>same</p>	<p>15. B.</p>	<p>Lesson 11 Lesson 48</p>
<p>16. $\frac{10^5 \cdot 10^0}{10^3}$ equals: $\frac{10^5}{10^3} = 10^2$</p>	<p>16. 10^2</p>	<p>Lesson 27</p>
<p>17. $\sqrt{5^2 - 4^2}$ equals: $\sqrt{25 - 16} = \sqrt{9}$</p>	<p>17. 3</p>	<p>Lesson 15</p>
<p>18. Which number is irrational?</p> <p><input checked="" type="radio"/> a. $\sqrt{5}$ b. $\sqrt{16} = 4$ c. -8 d. $0.\overline{12}$</p>	<p>18. A.</p>	<p>Lesson 16</p>
<p>19. $33\frac{1}{3}\%$ of $\frac{4}{5}$ of \$299 is about: $\frac{1}{3} \cdot \frac{4}{5} \cdot \frac{300}{1}$</p>	<p>19. \$80</p>	<p>Lesson 84</p>
<p>20. Order the numbers from least to greatest: $0.1, 0, -1, \frac{1}{100}$ $\frac{1}{100}$</p>	<p>20. $-1, 0, \frac{1}{100}, 0.1$</p>	<p>Lesson 1 Lesson 12</p>
<p>21. Solve the proportion for x: $\frac{6.4}{x} = \frac{8}{51.2}$ $\frac{1.6}{6.4} = \frac{8}{x}$ $1.6 \overline{) 51.2}$ $\frac{32}{32}$</p>	<p>21. 32</p>	<p>Lesson 44</p>
<p>22. A team won 80% of its games and lost the rest. Its won-lost ratio is:</p>	<p>22. 4:1</p>	<p>Lesson 29</p>

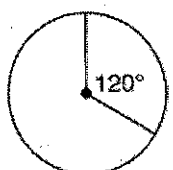
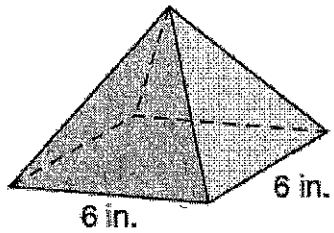

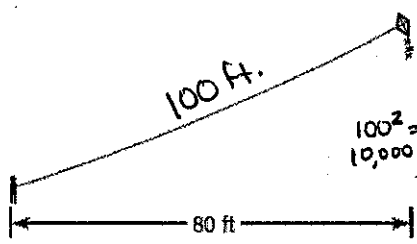
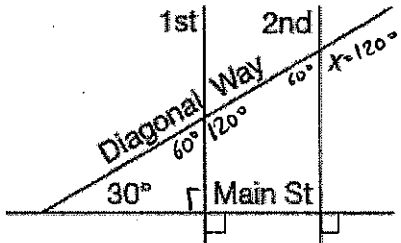
W: 80 → $\frac{4}{5}$
L: 20 → $\frac{1}{5}$

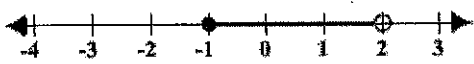
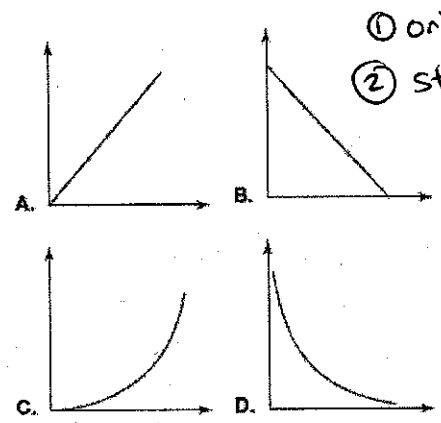
Stage 1: 2 hrs
Stage 2: 4 hrs.

$$\frac{160}{6} = 26.\bar{6} \text{ mph}$$

<p>23. The cyclists rode the first 80 miles of the stage at 40 mph and the second 80 miles at 20 mph. What was their average speed for the 160-mile ride?</p>	<p>23. $\approx 27 \text{ mph}$</p>	<p>*Bonus question* Lesson 105</p>									
<p>24. Michelle surveyed her classmates and recorded their shoe sizes on a line plot. What is the median size?</p>  <p style="text-align: center;">Shoe Sizes of Classmates</p>	<p>24. size 8</p>	<p>Lesson 7 Lesson 103</p>									
<p>25. Two red marbles, three white marbles, and five blue marbles are in a bag. Two marbles are drawn from the bag <u>without replacement</u>. What is the probability that <u>both</u> marbles are <u>white</u>? $\frac{3}{10} \cdot \frac{2}{9} = \frac{6}{90} = \frac{1}{15}$</p>	<p>25. $\frac{1}{15}$</p>	<p>Lesson 83</p>									
<p>26. If a \$5,000 investment grows 10% annually, what will be its value after three years? $5000(1.1)^3$</p>	<p>26. \$6,655</p>	<p>*Bonus Question* Investigation 10</p>									
<p>27. Steven drove 182 miles in 3 hr 30 min. What was his average speed? $3.5 \overline{)182}$</p>	<p>27. 52 mph</p>	<p>Lesson 7</p>									
<p>28. The store owner buys clothes at wholesale and adds 60% to the wholesale price to set the retail price. The retail price of a pair of pants is \$48.00. What is the wholesale price?</p> <table border="1" data-bbox="0 1465 162 1638"> <tr> <td>orig</td> <td>100</td> <td>x</td> </tr> <tr> <td>change</td> <td>60</td> <td></td> </tr> <tr> <td>new</td> <td>160</td> <td>48</td> </tr> </table> $\frac{100}{160} = \frac{x}{48}$	orig	100	x	change	60		new	160	48	<p>28. \$30</p>	<p>Lesson 67</p>
orig	100	x									
change	60										
new	160	48									
<p>29. Amanda missed 3 of the 25 $\frac{22}{25} = \frac{x}{100}$ questions but answered the rest correctly. What percent of the questions did Amanda answer <u>correctly</u>?</p>	<p>29. 88%</p>	<p>Lesson 11 Lesson 48</p>									
<p>30. Carl ran the first 4 kilometers in 26 minutes. At that rate how long will it take Carl to run 10 kilometers? $\frac{4}{26} = \frac{10}{x}$</p>	<p>30. 65 min. or 1 hr. 5 min.</p>	<p>Lesson 49</p>									

<p>31. Which figure does not appear to be a parallelogram?</p> <p>A.  B. </p> <p>C.  D. </p>	<p>31.</p> <p>D.</p>	<p>Investigation 3</p>
<p>32. The $m\angle DBC = 118^\circ$. What is the measure of $\angle A$?</p> 	<p>32.</p> <p>$m\angle A = 28^\circ$</p>	<p>Lesson 18 Lesson 20</p>
<p>33. What is the perimeter of the rectangle?</p> 	<p>33.</p> <p>$3x + 3x = 6x$ $x - 5 + x - 5 = 2x - 10$ $6x + 2x - 10 =$ $8x - 10$</p>	<p>Lesson 92</p>
<p>34. What is the ratio of the circumference of the circle to the perimeter of the square?</p> <p>$C = \pi \cdot d$ $P = 4d$</p>  <p>$\frac{\pi \cdot d}{4d}$</p>	<p>34.</p> <p>$\frac{\pi}{4}$</p>	<p>Lesson 39</p>
<p>35. What is the lateral surface area of this rectangular prism?</p>  <p>$2 \cdot (8 \cdot 3) = 48$ $2 \cdot (8 \cdot 5) = 80$ $48 + 80 = 128$</p>	<p>35.</p> <p>128 in^2</p>	<p>Lesson 43</p>

<p>36. The diameter of a circle is 18 cm. What is the area of a 120° sector? (Leave your answer in terms of π.)</p> <p>$\frac{120^\circ}{360^\circ} = \frac{1}{3}$</p>  <p>$r=9$ $A = \pi \cdot 9^2$ $A = 81\pi$ $\uparrow \div 3$</p>	<p>36.</p> <p>$27\pi \text{ cm}^2$</p>	<p>Lesson 40</p>
<p>37. The height of a square pyramid is 5 in. What is the volume of the pyramid?</p>  <p>$V = \frac{1}{3} B \cdot h$ $\frac{1}{3}(36)(5)$</p>	<p>37.</p> <p>60 in^3</p>	<p>Lesson 86</p>
<p>38. A flagpole casts a shadow 30 ft long while a <u>yard stick</u> casts a shadow 24 in. long. About how tall is the flagpole?</p> <p>$\frac{3}{2} = \frac{x}{30}$</p> 	<p>38.</p> <p>45 ft.</p>	<p>Lesson 35 Lesson 65</p>
<p>39. A kite on a 100-foot string is directly above a point 80 ft away. About how high is the kite?</p>  <p>$100^2 = 80^2 + x^2$ $10,000 = 6,400 + x^2$ $3,600 = x^2$ $60 = x$</p>	<p>39.</p> <p>60 ft.</p>	<p>Investigation 2</p>
<p>40. Diagonal Way crosses 1st Street and 2nd Street as shown. The measure of $\angle x$ is about:</p> 	<p>40.</p> <p>120°</p>	<p>Lesson 10 Lesson 54</p>
<p>41. $4x + 7y - 3x + y$ equals:</p>	<p>41. $x + 8y$</p>	<p>Lesson 31</p>

<p>42. Evaluate $4x - 2y + 5$ when $x = 5$ and $y = -3$</p> $4(5) - 2(-3) + 5 = 20 - (-6) + 5 = 26 + 5 =$	<p>42. 31</p>	<p>Lesson 14 Lesson 36</p>
<p>43. $(-1)^2 + (-1)^0 + (-1)^1 + (-1)^{-4}$ equals:</p> $1 + 1 + (-1) + \frac{1}{(-1)^4} = 1 + \frac{1}{1}$	<p>43. 2</p>	<p>Lesson 36 Lesson 51</p>
<p>44. Factor $10x^2 - 15x$</p> $5x(2x - 3)$	<p>44. $5x(2x - 3)$</p>	<p>Lesson 21 Lesson 36</p>
<p>45. Simplify: $9x + 2(x - 3)$</p> $9x + 2x - 6 = 11x - 6$	<p>45. $11x - 6$</p>	<p>Lesson 21 Lesson 31</p>
<p>46. Solve for x:</p> $\frac{5}{6}x + \frac{3}{9} = \frac{4}{9}$ $\frac{5}{6}x + \frac{1}{3} = \frac{4}{9}$ $\frac{5}{6}x = \frac{4}{9} - \frac{1}{3} = \frac{4}{9} - \frac{3}{9} = \frac{1}{9}$ $\frac{5}{6}x = \frac{1}{9}$ $\frac{5}{6}x \cdot \frac{6}{5} = \frac{1}{9} \cdot \frac{6}{5}$ $x = \frac{2}{15}$	<p>46. $\frac{2}{15}$</p>	<p>Lesson 50</p>
<p>47. The graph of the equation $y = 4x - 2$ intercepts the y-axis at what point? (write your answer as a coordinate pair)</p>	<p>47. $(0, -2)$</p>	<p>Investigation 1 Lesson 56</p>
<p>48. Simplify: $\sqrt{96}$</p> $96 = 32 \cdot 3 = 16 \cdot 2 \cdot 3 = 16 \cdot 6$ $\sqrt{96} = \sqrt{16 \cdot 6} = 4\sqrt{6}$	<p>48. $4\sqrt{6}$</p>	<p>Lesson 74</p>
<p>49. Which inequality is shown on this number line?</p> 	<p>49. $-1 \leq x < 2$</p>	<p>Lesson 94</p>
<p>50. Which graph shows a proportional relationship between the variables?</p> <p>① origin ② straight line</p> 	<p>50. A</p>	<p>Lesson 47 Lesson 69</p>

$\sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2} \cdot \sqrt{2}$