

## ANSWER KEY

QUESTION	CORRECT ANSWER
1	<p>C</p> <p>Given: 5 birdhouse = 1 hour</p> <p>Solution:  <math>2\frac{3}{5}</math> hours = 2 <math>\frac{3}{5}</math> (5)  <math>2\frac{3}{5}</math> hours = <b>13 birdhouse</b></p>
2	<p>D</p> <p>Given: 5 kg = 4 days</p> <p>Solution:            Number of kilograms per day = <math>\frac{5}{4}</math>kg  <b>Number of kilograms per day = <math>1\frac{1}{4}</math>kg</b></p>
3	<p>A</p> <p>Given:            1 Vial = <math>8\frac{3}{4}</math> ml            8 vials = ?</p> <p>Solution:            8 vials = <math>8(8\frac{3}{4})</math>  <b>8 vials = 70 ml</b></p>
4	<p>B</p> <p>Given: 5 kg = \$16</p> <p>Solution:            5 kg = \$16            1 kg = <math>\frac{16}{5}</math>  <b>1 kg = \$3.20</b></p>

5	<p>E</p> <p>Given: 15.3 kg daily 7 days = ?</p> <p>Solution: 7 days = 15.3 (7) <b>7 days = 107.1 kilograms</b></p>
6	<p>D</p> <p>Given: L = 60 cm Increases by 20%</p> <p>Solution: New size = 60 + 60(0.2) <b>New size = 72 cm</b></p>
7	<p>C</p> <p>Given: Last month = \$75 This month = \$84</p> <p>Solution: Increase = 84 - 75 Increase = \$9</p> <p>Percentage = <math>\frac{9}{75} \times 100</math> <b>Percentage = 12%</b></p>
8	<p>A</p> <p>Given: <math>\frac{1}{4}</math> Wall = <math>\frac{1}{2}</math> hour</p> <p>Solution: <math>\frac{1}{4}</math> Wall = <math>\frac{1}{2}</math> hour Wall = <math>\frac{1}{2}</math> (4) <b>Wall = 2 hours</b></p>

9	<p>E</p> <p>Given:</p> $\frac{3}{5} \text{ Liters} = 6 \text{ cars}$ <p>Solution:</p> $\frac{3}{5} \text{ Liters} = 6 \text{ cars}$ $1 \text{ car} = \frac{\frac{3}{5}}{6} \text{ Liters}$ $\mathbf{1 \text{ car} = \frac{1}{10} \text{ Liters}}$
10	<p>B</p> <p>Given:</p> <p>10 identical blocks</p> $1 \text{ block} = 10 \frac{3}{8} \text{ cm}$ <p>Solution:</p> $10 \text{ blocks} = 10 \frac{3}{8} (10)$ $\mathbf{10 \text{ blocks} = 103 \frac{3}{4} \text{ cm}}$
11	<p>A</p> <p>Given:</p> <p>7 days = 3.5 Liters</p> <p>Solution:</p> <p>7 days = 3.5 Liters</p> $1 \text{ day} = \frac{3.5}{7}$ $\mathbf{1 \text{ day} = 0.5 \text{ Liters}}$
12	<p>E</p> <p>Given:</p> <p>Soup = <math>2 \frac{1}{2}</math> kg</p> <p><math>3 \frac{1}{2}</math> batches of soup = ?</p> <p>Solution:</p> $3 \frac{1}{2} \text{ Batches of soup} = 2 \frac{1}{2} (3 \frac{1}{2})$ $\mathbf{3 \frac{1}{2} \text{ Batches of soup} = 8 \frac{3}{4} \text{ kg}}$

13	<p>C</p> <p>Given:  1 pack = 12 metal sheet  1 pack = <math>40\frac{1}{2}</math> kg</p> <p>Solution:  We divide the total mass to number of metal sheet</p> <p>Therefore we get,  Mass per metal = <math>\frac{40.5}{12}</math>  <b>Mass per metal = <math>3\frac{3}{8}</math> kg</b></p>
14	<p>B</p> <p>Given:  4 days = 7 ml</p> <p>Solution:  4 days = 7 ml  1 day = <math>\frac{7}{4}</math>  1 day = <b><math>1\frac{3}{4}</math> ml</b></p>
15	<p>D</p> <p>Given:  L = 40 cm  0.8 times long after it shrank</p> <p>Solution:  New length = <math>40(0.8)</math>  <b>New length = 32 cm</b></p>
16	<p>B</p> <p>Given:  Hamburger = \$15  25% off</p> <p>Solution:  New price = <math>15 - 15(0.25)</math>  <b>New price = \$11.25</b></p>

17	<p>A  Given:  Before the storm = 375 meters  After the storm = 450 meters</p> <p>Solution:  Increases = 450 - 375  Increases = 75</p> <p>Percentage = <math>\frac{75}{375} \times 100</math>  <b>Percentage = 20%</b></p>
18	<p>B  Given:  8 Liters = \$12  \$7.5 = ?</p> <p>Solution:  8 Liters = \$12  \$1 = <math>\frac{8}{12}</math> Liters  \$1 = <math>\frac{2}{3}</math> Liters</p> <p>\$7.5 = <math>\frac{2}{3}</math> (7.5)  <b>\$7.5 = 5 liters</b></p>
19	<p>C  Given:  1 bag = 6 kg  <math>\frac{1}{4}</math> capacity = ?</p> <p>Solution:  <math>\frac{1}{4}</math> bag = <math>\frac{1}{4}</math> (6)  <math>\frac{1}{4}</math> <b>bag = 1 <math>\frac{1}{2}</math> kg</b></p>

20	<p>E</p> <p>Given: 2 hectares ← splits into 3 evenly</p> <p>Solution: 2 hectares = 3 child</p> <p><b>Hectares per child = <math>\frac{2}{3}</math> hectare</b></p>
21	<p>B</p> <p>Given: 1 box = 24.6 grams</p> <p>Solution: <math>3\frac{1}{2}</math> boxes = <math>3\frac{1}{2}</math> (24.6)</p> <p><b><math>3\frac{1}{2}</math> boxes = 86.1 grams</b></p>
22	<p>D</p> <p>Given: 10 cans of pizza sauce 1 pizza = <math>1\frac{1}{4}</math> cans of pizza sauce</p> <p>Solution: Number of pizza = <math>\frac{10}{1\frac{1}{4}}</math></p> <p><b>Number of pizza = 8 pizzas</b></p>
23	<p>A</p> <p>Given: <math>\frac{1}{2}</math> kg of bubble gum 5 friends</p> <p>Solution: Mass per friend = <math>\frac{\frac{1}{2}}{5}</math> kg</p> <p><b>Mass per friend = 0.1kg</b></p>

24	<p>B</p> <p>Given:</p> <p>Chocolate = <math>\frac{4}{5}</math> Total</p> <p><math>\frac{1}{2}</math> Chocolate = Sprinkles</p> <p>Solution:</p> <p>Assume that there are 100 cupcakes</p> <p>Chocolates = <math>\frac{4}{5}(100)</math></p> <p>Chocolate = 80</p> <p>Chocolate with sprinkles = <math>80(\frac{1}{2})</math></p> <p>Chocolate with sprinkles = 40</p> <p>Fraction = <math>\frac{40}{100}</math></p> <p><b>Fraction = <math>\frac{2}{5}</math></b></p>
25	<p>B</p> <p>Given:</p> <p>Red = <math>\frac{1}{2}</math> marbles</p> <p>Blue = <math>\frac{1}{3}</math> marbles</p> <p>Green = remaining</p> <p>Red = 24</p> <p>Solution:</p> <p>Let M = number of marbles</p> <p><math>24 = \frac{1}{2} M</math></p> <p>M = 48 marbles</p> <p>Blue = <math>\frac{1}{3} (48)</math></p> <p>Blue = 16</p> <p>Green = <math>48 - 24 - 16</math></p> <p><b>Green = 8 green marbles</b></p>

26	<p>E</p> <p>Given:  Chocolate bar = 30%  Ice cream = 45%  Bubble gum = \$2</p> <p>Solution:  Bubble gum = 100% - 30% - 45%  Bubble gum = 25% of the money</p> <p>Let M = total money  2 = 0.25M  <b>M = \$8</b></p>
27	<p>A</p> <p>Given:  17.5 meters ← cuts into 2 pieces  Shorter = <math>\frac{1}{4}</math> Longer</p> <p>Solution:  Shorter + Longer = 17.5  <math>\frac{1}{4}</math> Longer + Longer = 17.5</p> <p>1.25 (Longer) = 17.5  <b>Longer = 14 meters</b></p>
28	<p>A</p> <p>Given:  Students = 60  Girls = 60%  <math>\frac{1}{3}</math> Girls = Blue eyes</p> <p>Solution:  Girls = 60(0.6)  Girls = 36</p> <p>Blue eyes = <math>\frac{1}{3}</math> (36)  <b>Blue eyes = 12 girls with blue eyes</b></p>



29	<p>D</p> <p>Given:</p> <p>Diamonds = <math>\frac{1}{2}</math> Treasure</p> <p>Topaze = <math>\frac{5}{9}</math> remaining</p> <p>Rubies = 20</p> <p>Solution:</p> <p>Let T = number of gems in the treasure</p> <p><math>T - \frac{1}{2} T = \frac{1}{2} T \leftarrow</math> Remove the diamonds</p> <p><math>\frac{1}{2} T - \frac{1}{2} T \left( \frac{5}{9} \right) = \frac{2}{9} T \leftarrow</math> Remove the topazes, also equal to rubies</p> <p><math>\frac{2}{9} T = 20</math></p> <p><math>2T = 180</math></p> <p><b>T = 90 precious gems</b></p>
30	<p>C</p> <p>Given:</p> <p>Solution is 60% alcohol</p> <p>9 L = ?</p> <p>Solution:</p> <p>Alcohol = <math>9(0.6)</math></p> <p><b>Alcohol = 5.4 Liters</b></p>