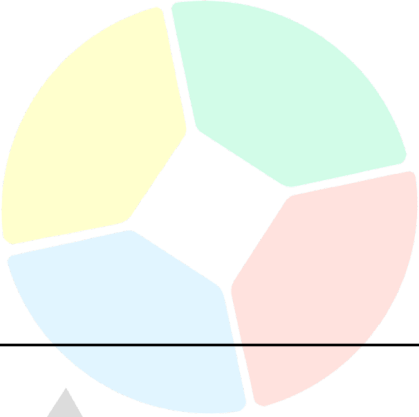

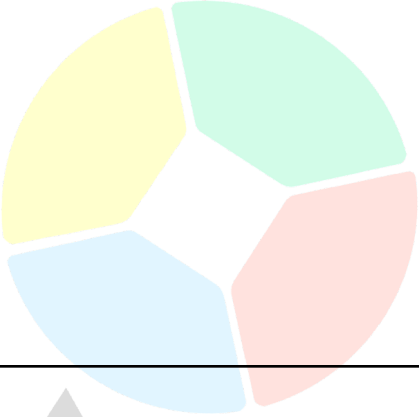


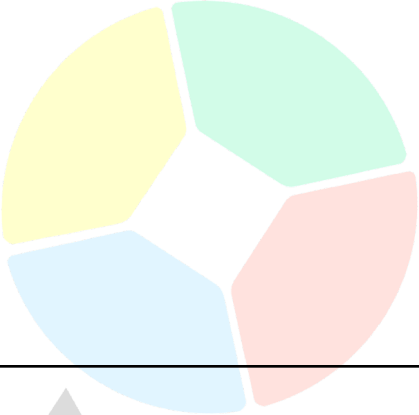
ANSWER KEY


QUESTION	CORRECT ANSWER
1	<p>D</p> <p>Given: 2 rocks mass = 266 grams Rock 1 = 37(Rock 2)</p> <p>Solution: Rock 1 + Rock 2 = 266 37(Rock 2) + Rock 2 = 266 38(Rock 2) = 266 Rock 2 = 266 Rock 2 = 7 grams</p> <p>Rock 1 = 266 - 6 Rock 1 = 259 grams</p>
2	<p>C</p> <p>Given: Bert = 2 hours Ernie = 3 hours</p> <p>Solution: Work problem formula $\left(\frac{1}{T}\right) = \left(\frac{1}{t_1}\right) + \left(\frac{1}{t_2}\right)$ Let T = time taken if both do the work together t1 = time taken by 1st person t2 time taken by 2nd person</p> $\frac{1}{T} = \frac{1}{2} + \frac{1}{3}$ $\frac{1}{T} = \frac{5}{6}$ $5T = 6$ $T = \frac{6}{5}$ <p>T = 1 $\frac{1}{5}$ hours</p>

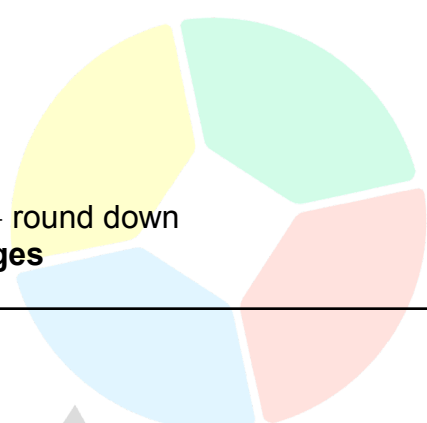
3	<p>C Given: Ed is older than Edd Eddy is older than Ed</p> <p>Solution: Edd = Youngest Ed = Middle Eddy = Oldest</p> <p>Therefore the answer is Eddy</p> 
4	<p>A Given: 15 page = \$36.9 4.5 service charge</p> <p>Solution: Let X = price per page</p> <p>36.9 = 4.5 + 15(X) 32.4 = 15X X = \$2.16</p>
5	<p>C Given: Maris = $\frac{4}{7}$ of the business Sell half of her share</p> <p>Solution: Shares after selling = $\frac{4}{7} - \frac{4}{7} \left(\frac{1}{2} \right)$ Shares after selling = $\frac{4}{7} - \frac{2}{7}$ Shares after selling = $\frac{2}{7}$</p>


6	<p>B Given: Carl = 120 cm or 1.2 m Carl shadow = 1 meter Benny = 100 cm or 1 m</p> <p>Solution: $\frac{\text{Carl}}{\text{Carl shadow}} = \frac{1.2}{1}$ $\frac{1.2}{1} = \frac{1}{\text{Benny shadow}}$ 1.2 Benny shadow = 1 Benny shadow = $\frac{1}{1.2}$ Benny shadow = $\frac{5}{6}$</p> 
7	<p>A Given: Anna = 8 Elsa Anna = 56</p> <p>Solution: Elsa = $\frac{\text{Anna}}{8}$ Elsa = $\frac{56}{8}$ Elsa = 7 Total = 7 + 56 Total = 63 flowers</p>
8	<p>D Given: 50 bags = 1 500 golds Sold 20 bags for 54 golds each Sold the remaining for 60 golds each</p> <p>Solution: Revenue = 20(54) + 30(60) Revenue = 2880 golds Profit = 2880 - 1500 Profit = 1380 golds</p>


9	<p>A</p> <p>Given: Scooby = 10 km per hour Shaggy = 7 times faster</p> <p>Solution: Shaggy = 10 x 7 Shaggy = 70 km per hour</p> <p>Time = $\frac{140}{70}$ Time = 2 hours</p> 
10	<p>D</p> <p>Given: Faster = 5 minutes after completing $\frac{1}{3}$ the faster machine stopped Slower = $\frac{1}{10}$ the rate of the faster</p> <p>Solution: Slower = $\frac{5}{\frac{1}{10}}$ ← Note Slower must have longer time to complete the order Slower = 10(5) Slower = 50 minutes</p> <p>Work needed = $1 - \frac{1}{3} = \frac{2}{3}$ work</p> <p>Time = $50(\frac{2}{3})$ Time = $\frac{100}{3}$</p>
11	<p>B</p> <p>Given: Elmo = 75 baseball cards Trade 5 cards in exchange for 2 cards in each of the first 5 trades then traded 6 cards in exchange for 2 cards for the next 3 trades</p> <p>Solution: Cards now = $75 - 5(5) + 2(5) - 6(3) + 2(3)$ Cards now = 48</p>


12	<p>E Given: Blender = \$157.5 ← discounted = \$67.5</p> <p>Solution: Let T = Regular price T - 67.5 = 157.5 T = 225</p> <p>Percentage = $\frac{67.5}{225} \times 100$ Percentage = 30%</p> 
13	<p>C Given: Five more than half of a number is 11</p> <p>Solution: $5 + \frac{1}{2} X = 11$ $\frac{1}{2} X = 6$ X = 12</p>
14	<p>A Given: Yesterday = 24 km Afternoon = 2(Morning)</p> <p>Solution: Morning + Afternoon = 24 Morning + 2 Morning = 24 3 Morning = 24 Morning = 8 km</p>

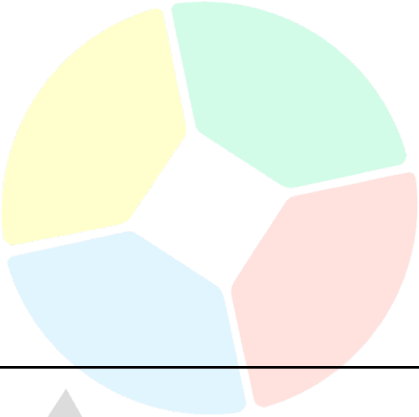
15	<p>C Given: L = 3 W Perimeter = 32</p> <p>Solution: Perimeter = 2(L + W) Perimeter = 2(3W + W) 32 = 8W W = 4</p> <p>L = 3W L = 4(3) L = 12 meters</p> 
16	<p>E Given: 5 packs = \$1.4 15 packs = ?</p> <p>Solution: 15 packs = 15(1.4) 15 packs = \$21</p>
17	<p>A Given: 36 goats Brown = White + 12</p> <p>Solution: White + Brown = 36 White + White + 12 = 36 2 White = 24 White = 12</p> <p>Brown = 12 + 12 Brown = 24 brown goats</p>
18	<p>D Given: 97,89,89,87,88</p> <p>Solution: Average = $\frac{97 + 89 + 89 + 87 + 88}{5}$ Average = 90</p>

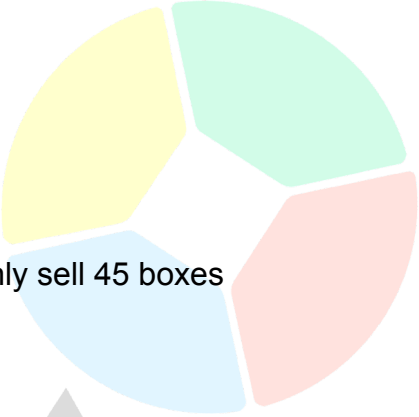
19	<p>D Given: 100 badges 24 students</p> <p>Solution: Number of badges per student = $\frac{100}{24}$ Number of badges per student = 4.167 ← round down Number of badges per student = 4 badges</p> 
20	<p>B Given: Scott = 46 years old</p> <p>Solution: Let D = Daughter's age $3(D) + 4 = 46$ $3D = 42$ D = 14 years old</p>
21	<p>D Given: Huey = $\frac{1}{3}$ Dewey Louie = Dewey + 6 Sum = 55</p> <p>Solution: Huey + Dewey + Louie = 55 $\frac{1}{3}$ Dewey + Dewey + Dewey + 6 = 55 $2\frac{1}{3}$ Dewey = 49 Dewey = 21 years old Huey = $\frac{1}{3}(21) = 7$ years old Louie = 21 + 6 = 27 years old ← oldest</p>

22	<p>C Given: Difference = 70 Bigger = 6 (Smaller)</p> <p>Solution: Bigger - Smaller = 70 6(Smaller) - Smaller = 70 5 smaller = 70 Smaller = 14</p> <p>Bigger = 6(14) Bigger = 84</p> 
23	<p>A Given: Last season = 4 392 apples Kept = 144 Boxed the remaining into 36 boxes</p> <p>Solution: Number of apples to be boxed = 4392 - 144 Number of apples to be boxed = 4248 apples</p> <p>Number of apple per box = $\frac{4248}{36}$ Number of apple per box = 118 apples</p>
24	<p>D Given: 1.36 meters Cuts into 2 pieces with a ratio 2:3</p> <p>Solution: Total ratio = 2 + 3 Total ratio = 5</p> $\frac{\text{Longer}}{\text{Total}} = \frac{3}{5}$ $\frac{\text{Longer}}{1.36} = \frac{3}{5}$ <p>5 Longer = 4.08 Longer = 0.816 meters or 81.6 centimeter</p>

25	<p>A</p> <p>Given: Alvin = Simon + 8 Theodore = Simon - 2 Sum = 60</p> <p>Solution: Alvin + Simon + Theodore = 60 Simon + 8 + Simon + Simon - 2 = 60 3 Simon = 54 Simon = 18 years old Alvin = 18 + 8 = 26 years old Theodore = 18 - 2 = 16 years old</p> 
26	<p>B</p> <p>Given: 40 meters and 52 meters</p> <p>Solution: Get the GCF of 40 and 52</p> $\begin{array}{r} 40 \\ / \quad \backslash \\ 4 \quad 10 \end{array} \quad \begin{array}{r} 52 \\ / \quad \backslash \\ 4 \quad 13 \end{array}$ <p>GCF = 4 meters Therefore the answer is 4 meters</p>
27	<p>E</p> <p>Given: Jack : Ryan = 3:4 Ryan = Jack + 5</p> <p>Solution: $\frac{3}{4} = \frac{Jack}{Jack + 5}$ 4 Jack = 3 Jack + 15 Jack = 15</p> <p>Ryan = Jack + 5 Ryan = 15 + 5 Ryan = 20 years old</p>

28	<p>D</p> <p>Given: 400 meters 3 km per hour 1.25 km long bridge</p> <p>Solution: 400 meters $\times \frac{1 \text{ km}}{1000 \text{ m}} = 0.4 \text{ km}$</p> <p>Total distance until crossing = 1.25 + 0.4 Total distance until crossing = 1.65 km</p> <p>Time = $\frac{1.65}{3}$ Time = 0.55 hour</p> <p>0.55 hour $\times \frac{60 \text{ minutes}}{1 \text{ hour}} = \mathbf{33 \text{ minutes}}$</p> 
29	<p>A</p> <p>Given: Vagosphere day = - 332° Celsius Vagosphere day = - 533° Celsius</p> <p>Solution: Difference = - 332 - - 533 Difference = 201° Celsius</p>
30	<p>C</p> <p>Given: 30 apples 50 orange 16 melons 24 apricots</p> <p>Solution: Total = 30 + 50 + 16 + 24 Total = 120</p> <p>Fraction = $\frac{30}{120}$ Fraction = $\frac{1}{4}$</p>

31	<p>D Given: 400 marbles Red = 312 Blue = Rest</p> <p>Solution: Red = 312</p> <p>Percent = $\frac{312}{400} \times 100$ Percent = 78%</p> 
32	<p>C Given: 326 slices of brownies Packed into box with 4 slices each</p> <p>Solution: $\frac{326}{4} = 81$ remainder 2</p> <p>Therefore there are 2 slices left unpacked</p>
33	<p>B Given: 700 marbles Gave = 175 marbles Packed the remaining into 5 boxes</p> <p>Solution: Number of marbles per box = $\frac{700 - 175}{5}$ Number of marbles per box = 105 marbles</p>

34	<p>A</p> <p>Given: 364 muffins then packed into boxes 1 box = 8 muffins \$5 per box</p> <p>Solution: Number of boxes = $\frac{364}{8}$ Number of boxes = 45.5 boxes ← can only sell 45 boxes</p> <p>Cost = 45(5) Cost = \$225</p> 
35	<p>C</p> <p>Given: $\frac{2}{9}$ of students = Boys ← Boys = $\frac{2}{9}$ Total Girls = Boys + 95</p> <p>Solution: Girls + Boys = Total ← Substitute Girls = Boys + 95 (Boys + 95) + Boys = Total</p> <p>$(\frac{2}{9}\text{Total}) + 95 + (\frac{2}{9}\text{Total}) = \text{Total}$ ← Substitute Boys = $\frac{2}{9}$ Total $\frac{4}{9}\text{Total} + 95 = \text{Total}$ Total - $\frac{4}{9}\text{Total} = 95$ $\frac{5}{9}\text{Total} = 95$ 5 Total = 855 Total = 171 Students</p> <p>Girls = Boys + 95 Girls = $\frac{2}{9}\text{Total} + 95$ ← Boys = $\frac{2}{9}\text{Total}$ Girls = $\frac{2}{9}(171) + 95$ Girls = 38 + 95 Girls = 133 girls</p>