(Talent & Olympiad Question)

Measurement

Multiple Choice Questions

1. Study the following.

52.8 kg - 287.93 kg = P kg Q g

What are the respective values of P and Q ?

(a) 238, 87 (b) 237, 88

(c) 814, 73 (d) 87, 238

2. Bhavani's present age is 11 year's $\rightarrow$ 3 months. How old will she be in $\rightarrow$ 18 months' time?

(a) 13 years 3 months

(b) 11 years 9 months

(c) 12 years 9 months

(d) 12 years 6 months

3. A piece of string was cut into 12 equal pieces. The length of 5 such pieces is $\frac{15}{8}m$. Find the length of the original piece of string.

(a) 4.8 cm (b) 4.5 cm

(c) 0.375 cm (d) 4.5 m

4. What is the boiling point of water on the celsius scale?

(a) $10^{\circ}C$ (b) $100^{\circ}C$

(c) $50^{\circ}C$ (d) $37^{\circ}C$

5. What fraction of 73 ℓ 80 $m\ell$ is 3.6 ℓ ?

(a) $\frac{2}{41}$ (b) $\frac{1}{203}$

(c) $\frac{10}{203}$ (d) $\frac{10}{23}$

6. Which of the following is the ratio of 1 m 5 cm to 3.5 km ?

(a) 3 : 7 (b) 3 : 10

(c) 3 : 700 (d) 3 : 10000

7. A tailor can alter 8 shirts in 39 minutes. At this rate, how many shirts can he alter in $3\frac{1}{4}$ hours?

(a) 32 (b) 40

(c) 45 (d) 36

8. Roja bought $1\frac{1}{2}kg$ of sugar. Kamala bought half as much sugar as Roja. What was the total mass of sugar bought by both of them?

(a) $2\frac{1}{4}kg$ (b) $2\frac{1}{2}kg$

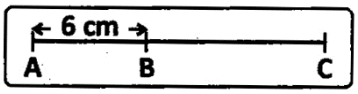
(c) $4\frac{1}{2}kg$ (d) 3 kg

9. 43.16ℓ of juice was transferred into a barrel containing 39 ℓ 30 $m\ell$ of juice. What is the total volume of juice in the barrel?

(a) 81ℓ 790 $m\ell$ (b) 83ℓ 350 ℓ

(c) 85ℓ 60 $m\ell$ (d) 82ℓ 190 $m\ell$

10. Observe the line given.



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If the ratio of the length of AB to the length of BC is 2 : 5 , find the length of AC .

(a) 21 cm (b) 15 cm

(c) 30 cm (d) 9 cm

11. Girish can paint 9 flowers in 3 minutes. At this rate, how many flowers can he paint in 1 20 seconds?

(a) 18 (b) 27

(c) 12 (d) 6

12. 5ℓ of syrup was poured into bottles of $300\ m\ell$ each. How much more syrup was needed to completely fill all the bottles used?

(a) $150\ m\ell$ (b) $100\ m\ell$

(c) $250\ m\ell$ (d) $200\ m\ell$

13. What is the temperature at which water freezes?

(a) $0°C$ (b) $36.5°C$

(c) $37°C$ (d) $100°C$

14. A box full of buttons has a mass of $2\ kg$. When it is $\frac{1}{3}$ full, its mass is only $800\ g$. What is the mass of the box?

(a) $200\ g$ (b) $150\ g$

(c) $1200\ g$ (d) $600\ g$

15. How many equal divisions are there on the Celsius scale?

(a) 1000 (b) 50

(c) 100 (d) 200

16. A typist can type 2520 words in 1 hour. How long will she take to type 1680 words?

(a) 28 minutes

(b) 40 minutes

(c) 42 minutes

(d) 840 minutes

17. A container has 16ℓ of water. This is enough to fill only $\frac{1}{4}$ of a tank. What is the capacity of the tank?

(a) 48ℓ (b) 40ℓ

(c) 64ℓ (d) 72ℓ

18. Rajesh left the office $1\ h\ 25$ min before noon. What time did Rajesh leave the office?

(a) 10 : 35 *a.m.* (b) 11 : 35 *a.m.*

(c) 01 : 25 *p.m.* (d) 10 : 35 *p.m.*

19. The ratio of Anita's mass to Mamata's mass is $4 : 7$. If their total mass is $99\ kg$, what is Mamata's mass?

(a) $63\ kg$ (b) $45\ kg$

(c) $36\ kg$ (d) $54\ kg$

20. Praveen bought 5 tins of orange juice each containing 0.75ℓ of orange juice. He poured the orange juice into a $6-$litre container. How many more tins must Praveen buy to fill up the container with orange juice?

(a) 30 (b) 2

(c) 5 (d) 3

21. The normal body temperature of some warm-blooded creatures is given in the table.

Creature	Temperature
Bat	$28°C$
Man	$37°C$
Bird	$40°C$
Spiny ant eater	$30°C$

The temperature of which creature when rounded to the nearest ten is $30°C$?

(a) Bat (b) Man

(c) Bird (d) Spiny ant eater

22. 65 $m\ell$ of orange juice is mixed with 0.835ℓ of water in a container. The mixture is then poured into cups of 0.09ℓ each. How many cups are needed?

(a) 1000 (b) 1000

(c) 1 (d) 10

23. 27th February 2013 was a Wednesday. What day was 27th March, the same year?

(a) Sunday (b) Wednesday

(c) Monday (d) Friday

24. Sudhir has a mass of 25 *kg*. His mother is twice as heavy as Sudhir. Sudhir's brother has a mass of $\frac{1}{4}$, of his mother's mass. What is the mass of Sudhir's brother?

(a) 13 *kg* 500 *g* (b) 12 *kg*

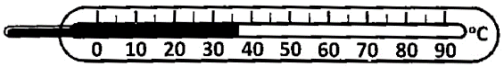
(c) 12 *kg* 500 *g* (d) 13 *kg*

25. A 35.08 *cm* long wire is cut into 2 pieces. One piece is bent into a square of side 2.8 *cm*. What is the length of the other piece?

(a) 23 *cm* (b) 24.88 *cm*

(c) 24 *cm* (d) 23.88 *cm*

26. Observe the given thermometer.



Which temperature of human beings does the thermometer show?

(a) High fever

(b) Low fever

(c) Normal body temperature

(d) Very high fever

27. A video recorder is four times as heavy as a camera. What is the mass of the camera if the mass of a video recorder is 2400 *g*?

(a) 600 *kg* (b) 6 *kg*

(c) 6000 *kg* (d) 0.6 *kg*

28. The parking fee at a certain car park is *Rs.* 12.50 per hour or part thereof. How much must one pay for parking his car there for $5\frac{1}{2}$ hours?

(a) *Rs.* 68.75 (b) *Rs.* 6.25

(c) *Rs.* 60.50 (d) *Rs.* 30.75

29. Smriti used 40% of a piece of 6-*m* long cloth to make 4 flags and the remainder to make some skirts. If each skirt required 1.2 *m* of cloth, how many skirts did she make?

(a) 13 (b) 30

(c) 4 (d) 3

30. A machine can produce 720 toys in 8 minutes. How many toys can it produce in 6 minutes?

(a) 1440 (b) 240

(c) 540 (d) 320

31. Containers *A* and *B* had 15ℓ and 5ℓ of water respectively. When an equal amount of water was poured into both containers, container *A* had twice the volume of water as container *B*. What was the least amount of water that was poured into each container?

(a) 5 $m\ell$

(b) 5000 $m\ell$

(c) 50 $m\ell$

(d) 500 $m\ell$

32. 24 cups of water are needed to fill $\frac{3}{5}$ of a basin. How many cups are needed to fill $\frac{1}{2}$ of the basin?

(a) 15 (b) 35

(c) 20 (d) 40

33. The total length of a rope, a string and a chain is 132.2 *m*. The rope is 1210 *cm* longer than the string. The chain is 4 times as long as the rope. How much longer is the chain than the string?

(a) 24.05 *m* (b) 84.25 *m*

(c) 96.2 *m* (d) 11.95 *m*

34. On a certain day, the temperatures recorded at different times is as shown in the table.

Time	Temperature
8 : 00 *a.m.*	24°*C*
12 : 00 noon	36°*C*
4 : 00 *p.m.*	34°*C*
8 : 00 *p.m.*	30°*C*

Between which times is the increase in temperature the maximum?

(a) 8 : 00 *a.m.* – 12 : 00 noon

(b) 12 *noon* – 8 : 00 *p.m.*.

(c) 12 noon- 4 : 00 *p.m.*.

(d) 4 : 00 *p.m.* – 8 : 00 *p.m.*

35. 7 similar iron balls and 4 similar steel balls have a total mass of 7.4 *kg*. Find the mass of each steel ball if each iron ball weighs 560 *g*.

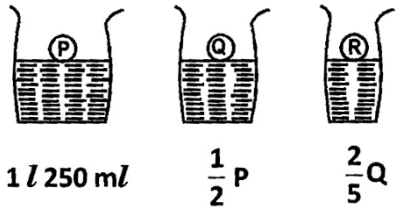
(a) 870 *g*

(b) 3480 *g*

(c) 780 *g*

(d) 3920 *g*

36. Observe the given beakers.



What is the volume of the liquid in beaker *R*?

(a) 250 *mℓ* (b) 216 *mℓ*

(c) 271 *mℓ* (d) 261 *mℓ*

37. Water flows into a tank at a rate of 350 *mℓ* per minute. How much water will be there in the tank after $\frac{3}{4}$ hour?

(a) 15.075 *ℓ* (b) 1575 *ℓ*

(c) 15.75 *ℓ* (d) 15750 *ℓ*

38. 20 *kg* of cashew nuts are divided into two boxes in the ratio 2 : 3. How many grams of cashew nuts are there in the lighter box?

(a) 1200 *g* (b) 8000 *g*

(c) 800 *g* (d) 12000 *g*

39. What date is it 19 days before 30th April?

(a) 11th April (b) 19th May

(c) 19th April (d) 11th May

40. Sharat bought 31 of orange juice. He drank 0.196*ℓ* on Monday and 200 *mℓ* on Tuesday. He stored the rest equally in 30 bottles. How much juice was there in each bottle?

(a) 86.8 *mℓ*

(b) 88.6 *mℓ*

(c) 86.6 *mℓ*

(d) 68.8 *mℓ*

41. Some flag poles were placed at equal distances $2\ m$ apart along the perimeter of a rectangular field. The field measures $38\ m$ by $24\ m$. How many flag poles were there around the field?

(a) 64 (b) 62

(c) 58 (d) 60

42. How many weeks and days are there in 1440 days?

(a) 25 weeks 30 days

(b) 250 weeks 3 days

(c) 25 weeks 5 days

(d) 205 weeks 5 days

43. Which of the following is incorrect?

(a) $3\ kg\ 20\ g = 3.02\ kg$

(b) $5\ kg\ 5\ g = 5.005\ kg$

(c) $230\ g = 0.23\ kg$

(d) $8\ kg\ 80\ g = 8.008\ kg$

44. Observe the categorisation of days based on the recorded temperatures.

Temperature	Day
$20^\circ C - 25^\circ C$	Mild weather
$25^\circ C - 30^\circ C$	Warm weather
$0^\circ C - 10^\circ C$	Cold weather
$30^\circ C - 35^\circ C$	Hot weather

Mr. Varma's family planned to go on a picnic. What is the range of temperature suitable to go on a picnic?

(a) $0^\circ - 10^\circ C$

(b) $20^\circ C - 25^\circ C$

(c) $30^\circ C - 35^\circ C$

(d) $25^\circ C - 30^\circ C$

45. A shopkeeper had $600\ kg$ of sugar. He sold $252\ kg$. What percentage of sugar is remaining?

(a) 48% (b) 62%

(c) 58% (d) 42%

46. Shruti had $\frac{5}{6} kg$ of butter. She used $\frac{1}{3} kg$ of it to bake some biscuits and $\frac{1}{12} kg$ to bake a cake. How much butter is remaining with her (approximately)?

(a) $417\ g$ (b) $500\ g$

(c) $420\ g$ (d) $415\ g$

47. The mid-day temperature on a Sunday was $34^\circ C$. If fell by $9^\circ C$ by $8:00\ p.m.$ on Sunday and further by $3^\circ C$ by $2:00\ a.m.$ the next day. The temperature rose by $8^\circ C$ by $8:00\ a.m.$ on Monday, What is the temperature at $8:00\ a.m.$ on Monday?

(a) $12^\circ C$ (b) $30^\circ C$

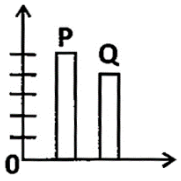
(c) $46^\circ C$ (d) $22^\circ C$

48. Sunitha is 65 years old and her son is 36 years old. How many years ago was Sunitha's age twice the age of her son?

(a) 8 (b) 6

(c) 12 (d) 7

49. Observe the given figure in which the heights of two poles P and Q are given.



If the height of pole P is $225\ cm$, how much shorter than $3\ m$ is pole Q?

(a) $180\ cm$ (b) $120\ cm$

(c) $140\ cm$ (d) $160\ cm$

50. An iron rod, heated to $120°C$ is kept in the open. The rod loses $2°C$ temperature every minute. What would the temperature of the rod be after 16 minutes?

(a) $88°C$ (b) $98°C$

(c) $78°C$ (d) $32°C$

51. Satish bought $14\frac{2}{3}kg$ of flour and his friend bought $10\frac{1}{4}kg$ of flour. Together, they used $20\frac{5}{6}kg$ of flour to make some rotis. How much flour was remaining with them?

(a) $4\frac{1}{4}kg$ (b) $3\frac{1}{4}kg$

(c) $4\frac{11}{12}kg$ (d) $4\frac{1}{12}kg$

52. Amruta started painting a picture at $10\ a.m.$. She stopped for lunch at $12:30\ p.m.$ and resumed painting an hour later. How long did she actually spend painting if she finished at $2\ p.m.$?

(a) $4\frac{1}{2}h$ (b) $4h$

(c) $3h$ (d) $3\frac{1}{2}h$

53. The heights of some children are given in the box.

Name	Height
Mahesh	78 *cm*
John	90 *cm*
Bhaskar	?
Average	84 *cm*

What is the height of Bhaskar?

(a) 168 *cm* (b) 84 *cm*

(c) 78 *cm* (d) 90 *cm*

54. Water in a vessel is at a temperature of $38.5°C$. By how much must its temperature be increased so as to boil it?

(a) $38.5°C$ (b) $100°C$

(c) $61.5°C$ (d) $82.5°C$

(10-11): Water from a faulty tap drips at the rate of 250 ml per minute.

55. How much water can be collected in 12 minutes?

(a) 3ℓ (b) 2.875ℓ

(c) 2.5ℓ (d) 3.500ℓ

56. How long will it take to fill a container of capacity 8l from the dripping tap?

(a) 40 min

(b) 16 min

(c) 30 min

(d) 32 min

57. The mass of a basket of fruits is $17000\ g$ corrected to the nearest thousand grams. What could be the greatest mass of the basket of fruits?

(a) $16500\ g$

(b) $16499\ g$

(c) $17499\ g$

(d) $17500\ g$

Answers with Explanation

1. (a) $\begin{array}{r} 526.8\ kg \\ -287.93\ kg \\ \hline 238.87\ kg \end{array}$

$= 238\ kg\ 87\ g$

$\therefore P = 238$ and $Q = 87$

2. (c) 18 months $= 1$ year 6 months

$\therefore$ 11 years 3 months $+ 1$ year 6 months

$= 12$ years 9 months

So, Bhavani will be 12 years 9 months after 18 months' time from now.

3. (d) Length of 5 pieces $= \frac{15}{8} m$

Length of 1 piece $= \frac{15}{8} m \div 5$

$= \frac{15}{8} \times \frac{1}{5} m = \frac{3}{8} m$

$\therefore$ Length of original piece

= Length of 12 pieces

$= \frac{3}{8} m \times 12 = \frac{9}{2} m = 4.5\ m$

4. (b) Boiling point of water on the Celsius scale is $100^\circ C$.

5. (c) $3.6\ \ell = 3.6 \times 1000\ m\ell = 3600\ m\ell$

$73\ell\ 80\ m\ell$

$= (73 \times 1000 + 80) m\ell = 73080\ m\ell$

$\therefore$ The required fraction $= \frac{3600}{73080}$

$= \frac{360}{7308} = \frac{10}{203}$

6. (d) $1\ m\ 5\ cm = 105\ cm$

$3.5\ km = 3.5 \times 1000\ m$

$= 3500\ m$

$= 3500 \times 100\ cm$

$= 350000\ cm$

$\therefore$ The required ratio is

$105 : 350000 = 3 : 10000$

7. (b) $3\frac{1}{4}$ hours

$= (3 \times 60 + \frac{1}{4} \times 60)$ minutes

$= 195$ minutes.

No. of shirts altered in 39 minutes $= 8$

$\therefore$ No. of shirts that can be altered in

195 minutes $= \frac{8}{39} \times 195 = 40$

8. (a)

9. (d)

10. (a)

11. (d)

12. (b)

13. (a)

14. (a)

15. (c) The Celsius scale is divided into 100 equal divisions each representing a degree.

16. (b) 2520 words $\rightarrow 1\ h = 60$ minutes

$1680 \rightarrow \frac{60}{2520} \times 1680$ min

$= 40$ minutes

17. (c) $\frac{1}{4}$ tank $\rightarrow 16\ \ell$

$1 = \frac{4}{4}$ tank $\rightarrow 16l \times 4 = 64l$

18. (a) Time at noon $= 12$

$1\ h\ 25$ min before noon

$= 12 - 1\ h\ 25$ min

$= 10\ h\ 35$ min

$\therefore$ Rajesh left the office at $10:35$ *a.m.*

19. (a) Ratio of masses of Anita and Mamata $= 4:7$

Total units $= 4 + 7 = 11$

Total mass $= 99\ kg$

$\therefore \quad 1\ unit = \frac{99}{11} kg = 9\ kg$

Mamatas' mass $= 7\ units$

$= 7 \times 9\ kg = 63\ kg$

20. (d) Quantity of juice in each tin $= 0.75\ell$

Total quantity in 5 tins

$= 5 \times 0.15\ell = 3.75\ell$

Quantity of juice needed to fill up the $6-$litre container

$= 6\ell - 3.75\ell = 2.25\ell$

$\therefore$ No. of tins needed to be bought

$= \frac{2.25\ell}{0.75\ell} = 3$

21. (a) Temperature of Bat $= 28°C$

$\approx 30°C$ (Rounded to the nearest ten.)

22. (d) Total mixture $= 65\ m\ell + 0.835\ell$

$= 0.065\ell + 0.835\ell = 0.900\ell = 0.9\ell$

Capacity of a cup $= 0.09\ell$

$\therefore$ No. of cups needed $= \frac{0.9\ell}{0.09\ell} = 10$

23. (b) February 2013 has 28 days as 2013 is a non-leap year.

Wednesdays in the next weeks are 6th March $(27+7)$, 13th March, 20th March and 27th March. So, 27th March 2013 was a Wednesday.

24. (c)

25. (d)

26. (c) The temperature indicated on the given thermometer is $37°C$, which the normal body temperature of a human being is.

27. (d) Mass of a video recorder $= 2400\ g = 4\times$ mass of a camera

$\therefore$ Mass of a camera $= \frac{2400}{4} g = 600\ g$

$= 0.6\ kg$

28. (a) Parking fee per hour or part there of $=$ *Rs.* 12.50

$\therefore$ Parking fee to be paid for $5\frac{1}{2}$ hours

$= Rs.\ 12.50 \times 5\frac{1}{2}$

$= Rs.\ 12.50 \times 5.5 = Rs.\ 68.75$

29. (d) 40% of $6\ m$ long cloth is used for flags and the remaining for skirts.

$\therefore$ Length of cloth used for skirts

$= (100 - 40)\%$ of $6\ m$

$= 60\%$ of $6\ m$

$= 60\%$ of $600\ cm$

$= \frac{60}{100} \times 600\ cm = 360\ cm$

Length of cloth needed for each skirt $= 1.2\ m = 120\ cm$

$\therefore$ No. of skirts $= \frac{360\ cm}{120\ cm} = 3$

30. (c) No. of toys produced in 8 minutes = 720

$\therefore$ No. of toys produced in 6 minutes

$$= \frac{720}{8} \times 6 = 540$$

31. (b)

Amount of water in container A (in l)	Amount of water in container B (in l)	Amount of water in container C (in l)
15	5	0
16	6	1
17	7	2
18	8	3
19	9	4
20	10	5

The least amount of water poured into each container $= 5\ell = 5000\ m\ell$.

32. (c) 24 cups $\rightarrow \frac{3}{5}$ basin

$\frac{5}{5}$ basin $\rightarrow \frac{5}{3} \times 24 = 40$ cups

$\therefore$ To fill $\frac{1}{2}$ of the basin the no. of cups needed

$$= \frac{40}{2} = 20$$

33. (b)

34. (a)

35. (a)

36. (a)

37. (c) Amount of water that flows into the tank in 1 min $= 350\ m\ell$

$\frac{3}{4}$ hour $= \frac{3}{4} \times 60$ minutes $= 45$ minutes

1 min $\rightarrow 350\ m\ell$

45 min $\rightarrow 350 \times 45\ m\ell = 15.75\ m\ell$

38. (b) Mass of cashew nuts in the lighter box

$$= \frac{2}{5} \times 20\ kg = 8\ kg = 8000\ g$$

39. (a) 19 days before 30"1 April is 11'"April as $11 + 19 = 30$ (11th included.)

40. (a) Remaining juice

$$= 3\ell - (0.196\ell + 200\ m\ell)$$

$$= 3000\ m\ell - (396\ m\ell)$$

$$= 2604\ m\ell$$

No. of bottles = 30

$\therefore$ Quantity of juice in each bottle

$$= \frac{2604}{30} = 86.8\ m\ell$$

41. (b) Length of the rectangular field = 38 *cm*

Breadth = 24 *cm*

$\therefore$ Perimeter $= 2(38 + 24)$

$$= 2 \times 62\ m$$

Flag poles are placed $2\ m$ apart along the perimeter of the field.

$\therefore$ No. of flag poles around the field

$$= \frac{2 \times 62\ m}{2\ m} = 62$$

42. (d) 7 days = 1 week

1440 days $= \frac{1440}{7}$ weeks

$= 205$ weeks 5 days

43. (d) 8 *kg* 80 *g* $= (8000 + 80)g$

$$= 8080\ g$$

$$= 8.08\ kg$$

$$\neq 8.008\ kg$$

44. (b) Mild weather is desirable to go on a picnic. The temperature range for mild weather is $20^{o}C - 25^{o}C$.

45. (c) Total quantity of sugar $= 600\ kg$

Quantity of sugar sold $= 252\ kg$

Quantity of sugar remaining

$$= (600 - 252)kg = 348\ kg$$

$\therefore$ Percentage of sugar remaining

$$= \frac{348}{600} \times 100\% = 58\%$$

46. (a) Quantity of butter remaining

$$= \left(\frac{5}{6} - \frac{1}{3} - \frac{1}{12}\right)kg = \frac{5}{12}kg$$

47. (b) Initial temperature on Sunday $= 34^{o}C$

Total fall in temperature by $2:00$ *a.m.* on Monday

$$= 9^{o}C + 3^{o}C = 12^{o}C$$

The temperature at $2:00$ *a.m.* On Monday

$= 34^{o}C - 12^{o}C = 22^{o}C$

The temperature rose by $8^{o}C$ by $8:00$ *a.m.* on Monday.

$\therefore$ Final temperature at $8:00$ *a.m.* on Monday.

$= 22^{o}C + 8^{o}C = 30^{o}C$

48. (d) Age difference between Sunitha and her son $= (65 - 36)$ years $= 29$ years.

So, 7 years ago, Sunitha's age was twice her son's age.

49. (b) From the figure, the 5th mark denotes the height of pole P which is $225\ cm$.

So, each marking is at $\frac{225}{5}cm = 45\ cm$

Pole Q is at the 4th mark. So, the height of pole $Q = 4 \times 45\ cm = 180\ cm$

The difference $= 3\ m - 180\ cm$

$$= (300 - 180)cm = 120\ cm$$

So, pole Q is $120\ cm$ less than $3\ m$.

50. (a) Temperature of the rod $= 120^{o}C$

Amount of heat lost every minute $= 2^{o}C$

$\therefore$ Amount of heat lost for 16 minutes

$$= 16 \times 2^{o}C = 32^{o}C$$

$\therefore$ The temperature of the rod after 16 minutes

$= 120^{o}C - 32^{o}C = 88^{o}C$

51. (d)

52. (c)

53. (b) Average height of children $= 84\ cm$

$\therefore$ Their total height

$= 3 \times 84\ cm = 252\ cm$

Height of Bhaskar

$$= [252 - (78 + 90)] = 84\ cm$$

$$= (252 - 168)cm = 84\ cm$$

54. (c) Water boils at $100^{o}C$.

$\therefore$ The temperature that is to be increased

$= (100 - 38.5)^{o}C = 61.5^{o}C$

55. (a) $1\ \text{min} \rightarrow 250\ m\ell$

$12\ \text{min} \rightarrow 12 \times 250\ m\ell = 3\ell$

56. (d) $250\ m\ell \rightarrow 1\ \text{min}$

$8\ell = 8000\ m\ell \rightarrow \frac{8000}{250}\ \text{min} = 32\ \text{min}$

57. (c) Numbers that can be rounded as 17000 to the nearest thousand are 16500 to 17499. Hence the greatest mass of the basket of fruits could be $17499\ g$.