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Year 10 MathsB Homework Sheet No.06

To be completed on loose-leaf paper.

Due date: _____

(1) Write these fractions in simplest form.

Example: $\frac{3}{2}\frac{27}{18} = \frac{3}{2}$

(a) $\frac{10}{12}$ (b) $\frac{7a}{9a}$

(c) $\frac{20m}{24}$ (d) $\frac{60n}{32}$

(2) Simplify the following.

Example: $\frac{2n}{3} + \frac{n}{4} = \frac{8n}{12} + \frac{3n}{12} = \frac{5n}{12}$

(a) $\frac{3}{11} + \frac{4}{11}$ (b) $\frac{5}{6} - \frac{2}{3}$

(c) $\frac{3}{7} + \frac{1}{8}$ (d) $\frac{3x}{11} + \frac{4x}{11}$

(e) $\frac{7d}{12} - \frac{d}{12}$ (f) $\frac{3a}{4} + \frac{2a}{7}$

(3) Solve these equations.

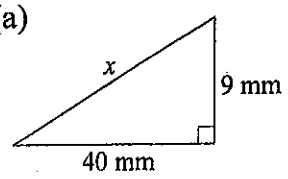
(a) $3y = 15$ (b) $\frac{a}{4} = -2$

(c) $a + 7 = 10$ (d) $6 - p = 10$

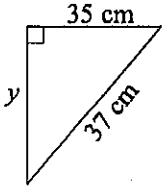
(e) $\frac{y+1}{5} = 2$ (f) $2p - 1 = -11$

(4) Use Pythagoras' theorem to calculate the unknown side length of these triangles.

(a)

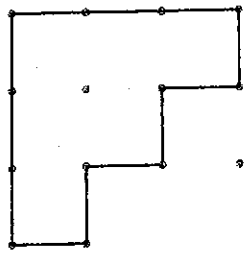


(b)

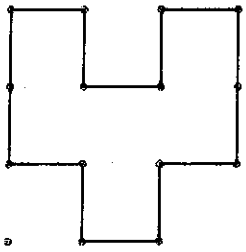


(5) Find the perimeter of each of the following shapes, which are drawn on 1 cm square dot paper.

(a)

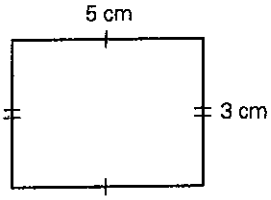


(b)

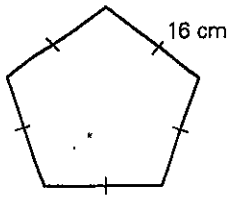


(6) Find the perimeters of the following shapes.

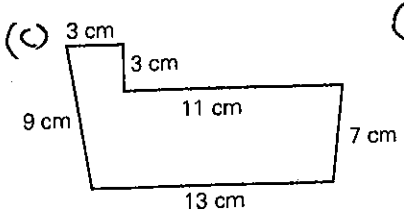
(a)



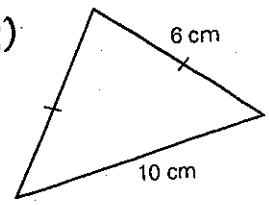
(b)



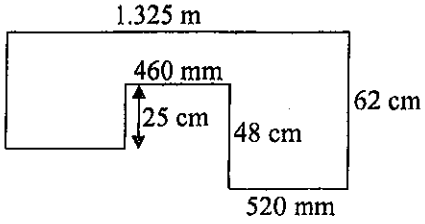
(c)



(d)

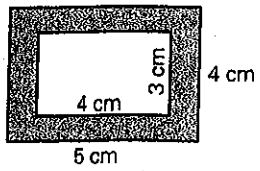


(7) Find the perimeter, in cm, of the shape below.

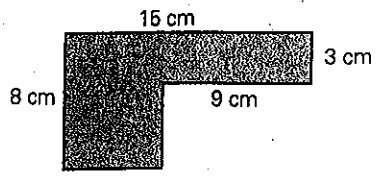


(8) Find the area of each shaded shape.

(a)



(b)



(9) The pulse rate of 20 people was measured in beats/minute.
The results were as follows.

50 77 62 83 93 72 63 54 58 64
75 78 83 84 92 59 80 71 76 99

Represent this information on an ***ordered*** stem and leaf plot.

Stem	*Leaf*

Note: $\overline{5 \mid 0}$ *means 50*

Calculate:

(a) the mean

(b) the median

(c) the lower quartile

(d) the upper quartile

(e) the interquartile range

(10) The ordered stem and leaf plot below shows a season's scores, both for, and against, the Slamdunks basketball team.

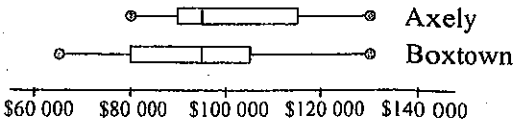
points for *Leaf*	*Stem*	***points against*** *Leaf*
9	1	
0 3 3 5 8	2	1 4 9
0 1 2 6 6 7 9	3	0 3 4 6 9
0 1 2 2	4	1 2 2 4 7 8 8
	5	0 5

Note: $\overline{2 \mid 1}$ *means 21 points*

(a) How many games did the Slamdunks play in the season?

(b) Find the mean and median scores for and against the Slamdunks.

(11) The sale prices for houses in two suburbs are represented in the box plots shown below.



Use the abbreviations A, B or C to correctly make the comparisons below.

A - Axely is larger B - Boxtown is larger
C - there is no difference between them

(a) Their medians

(b) Their highest house prices

(c) Their lowest house prices

(d) The range of their house prices