SCORE

Numbers
with Classified
answer book

8

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13- Fractions and The Correct Order of Operations

1. Work out

a $3\frac{1}{2} \times \left(\frac{3}{4} + \frac{4}{5}\right)$

b $2\frac{1}{3} + \frac{4}{9} \times \frac{1}{2}$

c $5\frac{2}{3} + \frac{3}{5} - \frac{1}{2}$

d $10 + \frac{5}{6} \times \frac{7}{10}$

e $5 \div \frac{3}{4} + \left(\frac{2}{3}\right)^2$

2. Work out these calculations. Write each answer as a mixed number in its simplest form. Show all the steps in your working.

a. $2\frac{1}{8} \div \frac{1}{4} \times \frac{3}{4}$

b. $\frac{9}{10} \times \frac{1}{2} + 2\frac{4}{5}$

c. $4\frac{1}{3} - (5\frac{1}{2} - 3\frac{1}{6})$

d. $\frac{2}{3} \div \frac{4}{9} + 2\frac{1}{4}$

3. (a) Draw a ring around **all** of the calculations that are equivalent to $\dfrac{9}{16} \div \dfrac{3}{4}$

$$\dfrac{16}{9} \times \dfrac{3}{4} \qquad \dfrac{9}{16} \times \dfrac{4}{3} \qquad \dfrac{9}{4} \times \dfrac{1}{3} \qquad \dfrac{16}{9} \times \dfrac{4}{3} \qquad \dfrac{3}{4} \times \dfrac{1}{1} \qquad \dfrac{3}{8} \times \dfrac{2}{1}$$

(b) Calculate $\quad 3 \times 1\dfrac{5}{6}$

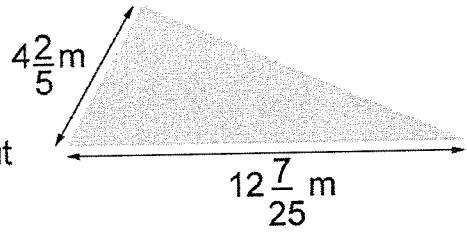Give your answer as a mixed number in its simplest form.

....

4. Work out.

$$4\dfrac{2}{5} - 2\dfrac{2}{3} + \dfrac{1}{3}$$

Give your answer as a mixed number in its simplest form.

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5. The diagram shows the lengths of two of the sides of a triangle.

The triangle has a perimeter of $25\frac{49}{50}$ m.
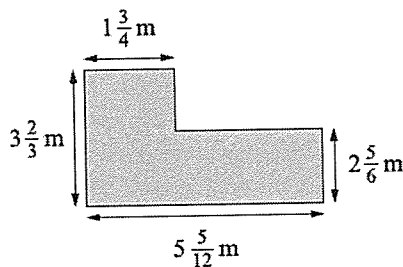
$4\frac{2}{5}$ m

$12\frac{7}{25}$ m

Write the calculation you must do to work out the length of the third side of the triangle.

6. Shania has a mass of $57\frac{2}{5}$ kg. Fu's mass is $2\frac{1}{4}$ kg more than Shania's mass.

The total mass of Shania, Fu and Ngoni is $173\frac{3}{4}$ kg. Work out Ngoni's mass.

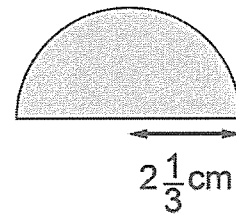7. Work out the area of this compound shape. Show all your working.

$1\frac{3}{4}$ m

$3\frac{2}{3}$ m

$2\frac{5}{6}$ m

$5\frac{5}{12}$ m

8. The diagram shows a compound shape made of a square joined to a rectangle. Work out the area of the shape.

$1\frac{5}{6}$ m

$1\frac{5}{6}$ m $2\frac{2}{3}$
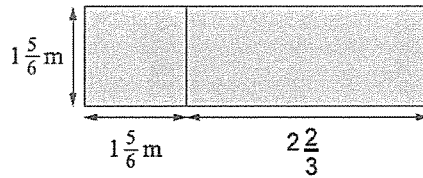
9. The diagram shows a semicircle.
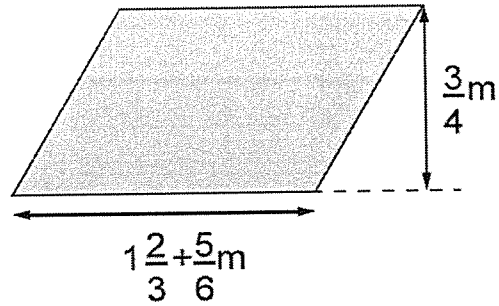   Work out
   a. the area of the semicircle

   $2\frac{1}{3}$ cm

   b. the perimeter of the semicircle.
   Use $\pi = \frac{22}{7}$

10. Work out the area of each shape. Show all your working.

$\frac{3}{4}$m

$1\frac{2}{3}+\frac{5}{6}$m

11. Holly has three bags of apples.

The first bag has a mass of $2\frac{4}{5}$ kg.

The mass of the second bag is twice the mass of the first bag.

The total mass of the three bags is $11\frac{13}{20}$ kg.