

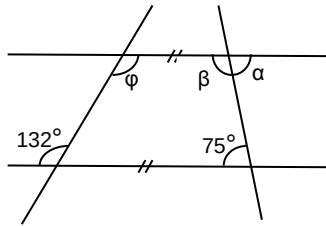
EAA admissions test grade 2

- 1.) Write the given numbers as a product of their lowest prime factors.
Hence, find their highest common factor (HCF) and their lowest common multiple (LCM):

$$\text{HCF} (84, 630, 1050) =$$

$$\text{LCM} (84, 630, 1050) =$$

2.)



Calculate the unknown angles:

$$\varphi = \dots\dots\dots$$

$$\alpha = \dots\dots\dots$$

$$\beta = \dots\dots\dots$$

Figure not to scale!

3.a) Convert the fraction into a mixed number: $\frac{27}{8} =$

3.b) Convert the mixed number into an improper fraction: $5\frac{3}{7} =$

3.c) Convert into a decimal: $\frac{17}{99} =$ $2\frac{1}{5} =$

3.d) Write as a fraction: $0.037 =$ $0.\dot{5} =$

4.a) 27 bananas are $\frac{3}{4}$ of how many bananas?

4.b) How many meters are $1\frac{2}{5}$ kilometres?

5.a) Complete the missing denominator: $\frac{6}{\quad} = \frac{30}{25}$

5.b) Reduce to the lowest terms: $\frac{15 \cdot 49}{21 \cdot 5} =$

6.) Calculate and give your answer to the lowest terms:

$$(2\frac{1}{3} + 1\frac{5}{6}) \cdot 1\frac{1}{5} - 1\frac{5}{9} : \frac{7}{15} =$$

7.) Draw the angle $\varphi = \angle AMB$ with $A(1,7)$, $M(4,1)$ (vertex) and $B(9,3)$ into a coordinate system.

a) How many degrees does the angle φ have?

b) Construct the angle bisector w_φ .

c) Construct the perpendicular bisector s_{AM} of the segment AM.

d) What are the coordinates of the point of intersection P of w_φ and s_{AM} ?

8.) Solve this equation and check your solution: $\frac{3 \cdot x}{5} + 9 = 12$

9.) Larry has a trade discount of 15 % on the selling price of all the articles at a hardware store.
How much will he pay for a saw priced \$260?