Daily Practice 26.8.15

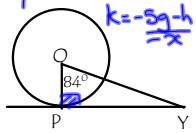
Q1. Rearrange the formula 5g + h – kx = 0 such that k is the subject

$-5g+h=kx$; $\frac{5g+h}{x}=k$; $-kx=-5g-h$; $k=\frac{5g+h}{x}$

Q2. Calculate the length of g

$\sin 68° = \frac{g}{15}$; $g = 13.91\text{cm}$

Q3. Calculate the size of the angle PYO



$84° + 90° = 174°$

$180° - 174° = 6°$

Q4. Two bottles are similar in shape. The diameter of the smaller bottle is 8cm, the diameter of the larger one is 9.12cm. If the smaller bottle is 500ml, what is the size of the larger one to 2 s.f.?

$s.f. = 9.12 \div 8 = 1.14$

$V.s.f. = (1.14)^3 = 1.481544$

$V = 500 \times 1.48\ldots = 740.772$

$\rightarrow 740\text{ml}$

Today we will be revising for our test.

Homework Due Monday

(g) Express $D = \frac{m}{n} - p$ in terms of n.

$\times n$; $\times n$

$Dn = m - pn$; $+pn$; $+pn$

$Dn + pn = m$

$n(D+p) = m$

Daily Practice 28.8.2015

Q1. Find 15% of 980

10% of 980 = 98

5% = 49

147

Q2. Multiply out and simplify 7(2x – 1) – (3x + 4)

$14x - 7 - 3x - 4$

$11x - 11$

Q3. Rearrange $x^2y + t = a$ such that x is the subject

$x^2y = a - t$; $x^2 = \frac{a-t}{y}$; $x = \sqrt{\frac{a-t}{y}}$

Q4. Two pieces of rectangular carpet are similar in shape. The length of the smaller one is 1.5m, the length of the larger one is 6m. If the area of the smaller one is 10.5m^2, state the area of the larger one.

$s.f. = 6 \div 1.5 = 4$

$A.s.f. = 4^2$

Area larger piece $= 10.5 \times 4^2 = 168\text{m}^2$

Today we will be continuing to revise over rearranging formulae.

Homework Due Monday

$S^2 = \frac{a+2}{x}$ to a

$V = \frac{1}{3}\pi r^2 h$ to r

Daily Practice 31.8.2015

Q1. Find the value of a house that was worth £73 000 and appreciated in value by 6% per annum for 2 years.

6% of 73000 = 73000 × 0.06 = £4380

73000 + 4380 = £77380

6% of 77380 = £4642.80

£77380 + 4642.80 = £82022.80

Q2. Rearrange the formula $\frac{3}{y} + t = r$ so that y is the subject

$\times y$: $3 + ty = ry$

$3 = ry - ty$

$3 = y(r - t)$

$y = \frac{3}{r-t}$

Q3. State the equation of the line joining (0, 3) and (2, 5)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5-3}{2-0} = \frac{2}{2} = 1$

$y = mx + c$

$5 = 2(1) + c$

$c = 3$

$y = 1x + 3$

$y = mx + c$

Q4. State the gradient & y - intercept of the line y = -3x + 4

gradient = $m = -3$

y-intercept = 4 (0,4)

Today we will be revising over right-angled trigonometry

Homework due!

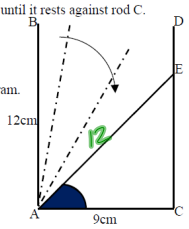
Revision of Right-Angled Trigonometry

In a switch mechanism lever AB rotates round A until it rests against rod C.

Point B touches rod CD at E.

AB = 12cm and AC = 9cm as shown in the diagram.

Calculate the size of the shaded angle when the switch is closed.



$\cos x° = \frac{9}{h} = \frac{9}{12}$

$\cos x° = \frac{9}{12}$

$x° = \cos^{-1}\left(\frac{9}{12}\right)$

$x = 41°$

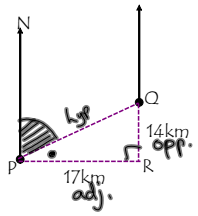
Revision of Right-Angled Trigonometry

31.8.15

Example

Given that the bearing from P to R is 090°

Calculate the bearing from P to Q

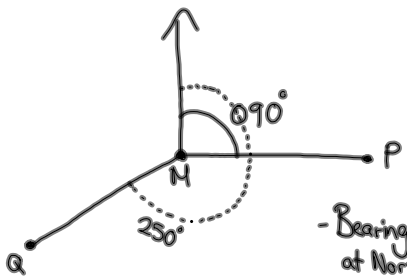


$\tan x° = \frac{opp}{adj.}$

$\tan x° = \frac{14}{17}$

$x° = \tan^{-1}\left(\frac{14}{17}\right) = 39.5°$ (to 1d.p.)

$90° - 39.5° = 50.5°$



- Bearings always start at North
- Measured in a clockwise direction.

Today we will be revising over trigonometry & angles in circles.

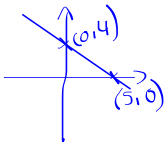
EXAM QUESTIONS

1.	No since $20{\cdot}4^\circ < 21^\circ$	**2.**	295cm or 2·95maA
3.	Correct since $3^\circ < 3{\cdot}05^\circ < 5^\circ$	**4.**	16·2cm or 16·3cm depending on rounding
5.	$28{\cdot}7^\circ$	**6.**	2·85m
7.	$33{\cdot}6^\circ$	**8.**	41·5m
9.	Yes, since $10^\circ < 11{\cdot}5^\circ < 12^\circ$	**10.**	8·57m

11.	$53{\cdot}1^\circ$	**12.**	2·04m
13.	$4{\cdot}9^\circ$	**14.**	11·5cm
15.	OK since $24^\circ < 24{\cdot}6^\circ < 26^\circ$	**16.**	42°
17.	$41{\cdot}4^\circ$	**18.**	**(a)** 7·9m **(b)** 70cm or 71cm [rounding]
19.	3·16m	**20.**	No since $40{\cdot}7^\circ > 40^\circ$

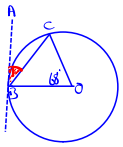
Daily Practice 29.2015

Q1. Round 81.52 to 1 significant figure

Q2. 

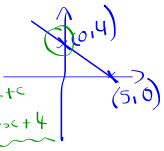
State the equation of the line shown

Q3. Calculate the size of angle ABC



Daily Practice 2.9.2015

Q1. Round 81.52 to 1 significant figure 80

Q2. 

State the equation of the line shown

$y = mx + c$

$y = -\frac{4}{5}x + 4$

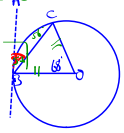
$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0-4}{5-0} = -\frac{4}{5}$

Q3. Calculate the size of angle ABC

$180^\circ - 68^\circ = 112^\circ$

$112^\circ \div 2 = 56^\circ$

$90^\circ - 56^\circ = 34^\circ = \hat{ABC}$



Today we will be revising over the circle and the straight line.

Attachments

Changing the subject (Int 2 PP).pdf

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