

Question block created by wizard

This exam contains 32 questions

1. According to the basic rules, calculate: $(2 + 4) \cdot 3 : 6 - 5 =$

- (a) -2
- o (b) -1
- o (c) 18

If choice a is selected set score to 1.

2. Which statement is correct? 3 divided by 4 is..

- (a) 0,75
- o (b) 1,33
- o (c) 0,25

If choice a is selected set score to 1.

3. Calculate: $128 \cdot 173 =$

- (a) 22144
- o (b) 9344
- o (c) 3460

If choice a is selected set score to 1.

4. Calculate: $\frac{2}{4} \cdot \frac{1}{4} =$

- (a) $\frac{1}{8}$
- o (b) $\frac{1}{2}$
- o (c) 2

If choice a is selected set score to 1.

5. Safety shoes have a price of € 250. You get 30% reduction. What do you need to pay now for the pair of shoes?

- o (a) € 220,00
- o (b) € 75,00
- (c) € 175,00

If choice c is selected set score to 1.

6. The area of a cylinder with a radius of 4 cm and a height of 5 cm is.... ($\pi = 3,14$)

- (a) 226,2 cm²
- o (b) 251,3 cm²
- o (c) 314 cm²

If choice a is selected set score to 1.

7. $\sqrt{(64)} =$

- (a) 8
- o (b) 10
- o (c) 2

If choice a is selected set score to 1.

8. $7^2 =$

- o (a) 14
- (b) 49
- o (c) 3,5

If choice b is selected set score to 1.

9. $a + a + b - c =$

- (a) $2a+b-c$
- o (b) $2a-b+c$
- o (c) a^2+b-c

If choice a is selected set score to 1.

10. Calculate: $^2/a + ^3/b =$

- (a) $(3a+2b) / (ab)$
- o (b) $5 / (a+b)$
- o (c) $(3a+2b) / (a+b)$

If choice a is selected set score to 1.

11. Calculate: $^{ab} / _b \cdot ^a / _c =$

- o (a) $1/c$
- o (b) c

- (c) a^2 / c

If choice c is selected set score to 1.

12. Calculate: $\frac{3x}{4y} + \frac{5x}{y}$

- o (a) $8x / 4y^2$
- o (b) $8x / 4y$
- (c) $23x / 4y$

If choice c is selected set score to 1.

13. Calculate: $3(a+b) =$

- o (a) $3b+a$
- (b) $3a + 3b$
- o (c) $3a+b$

If choice b is selected set score to 1.

14. Calculate: $(a+b) \cdot (a+b) =$

- o (a) $2ab + b^2$
- o (b) $a^2 + b^2$
- (c) $a^2 + 2ab + b^2$

If choice c is selected set score to 1.

15. Calculate: $\frac{1}{3} a - \frac{1}{4} a =$

- (a) $\frac{1}{12} a$
- o (b) $-\frac{7}{12} a$
- o (c) $-\frac{1}{4} a$

If choice a is selected set score to 1.

16. Calculate: $\frac{1}{3} a \cdot \frac{1}{4} a =$

- (a) $\frac{1}{12} a^2$
- o (b) $\frac{7}{12} a^2$
- o (c) $-\frac{7}{12} a^2$

If choice a is selected set score to 1.

17. When solving linear equations, the first step to do is (if available)

- (a) Transfer from right hand side to left hand side and vice versa, make sure that only the variable on the left side remains.
- (b) eliminate the brackets.
- (c) rearrange both sides.

If choice b is selected set score to 1.

18. Solve according to the rules of linear equations: $5(3k-7)+7 = 7(2k-4)$

- (a) $15k - 35 = 14k - 28$
- (b) $k = 0$
- (c) $29k = -56$

If choice b is selected set score to 1.

19. $4^{1/2} =$

- (a) $\sqrt{4}$
- (b) $4 \cdot 0,5$
- (c) $2\sqrt{2}$

If choice a is selected set score to 1.

20. $17_{(10)} = \dots\dots\dots(8)$

- (a) 21
- (b) 20
- (c) 17

If choice a is selected set score to 1.

21. Solve: $x^2 - 2x = 8$

- (a) $x = 4$ or $x = 2$
- (b) $x = 4$ or $x = -2$
- (c) $x = -4$ or $x = 2$

If choice b is selected set score to 1.

22. We can write: $b^x = y$ as.....

- (a) $^x\log(b) = y$
- (b) $^b\log(y) = x$
- (c) $^y\log(b) = x$

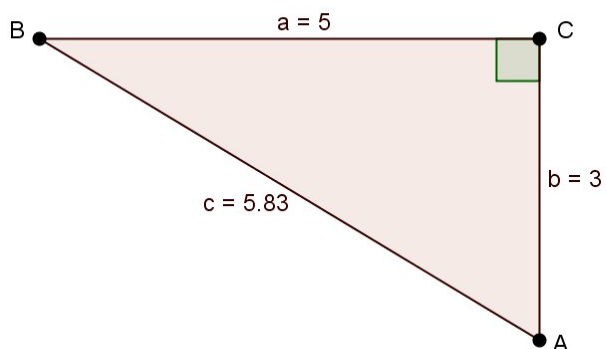
If choice b is selected set score to 1.

23. The sinus of an angle is:

- (a) adjacent divided by the hypotenus.
- (b) adjacent divided by the opposite.
- (c) opposite divided by the hypotenus.

If choice c is selected set score to 1.

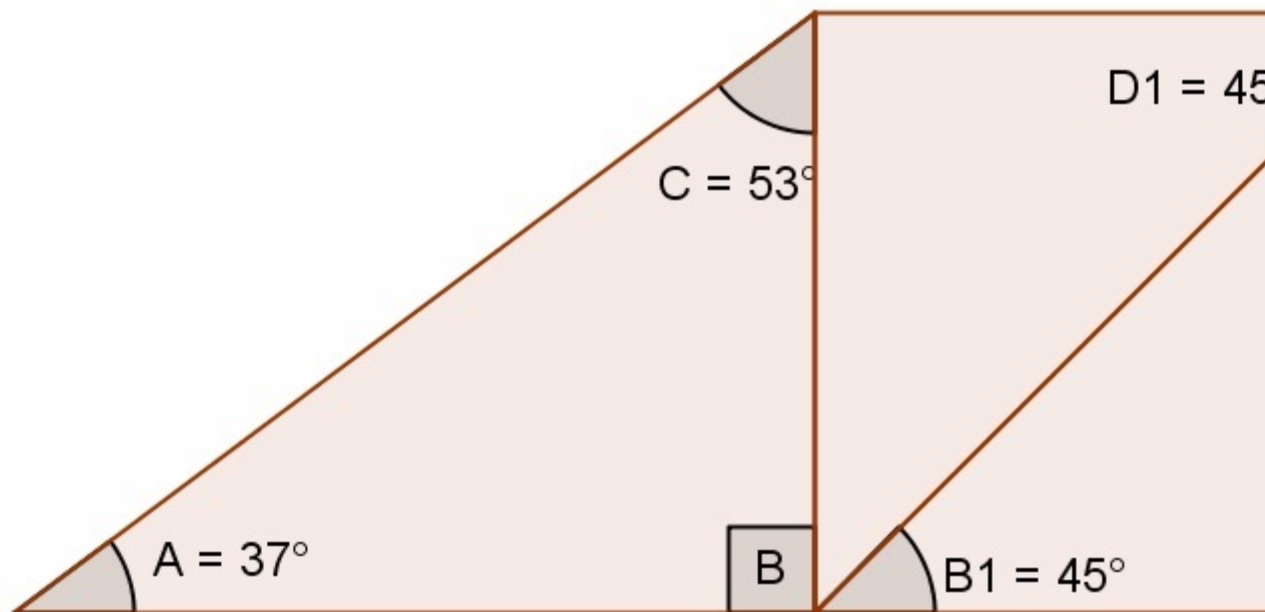
24. The tangent of angle A is?



- (a) $1\frac{2}{3}$
- (b) $\frac{3}{5}$
- (c) $1\frac{47}{50}$

If choice a is selected set score to 1.

25. Determine the magnitude of angle D2 ?



- (a) 80°
- (b) 79°
- (c) 81°

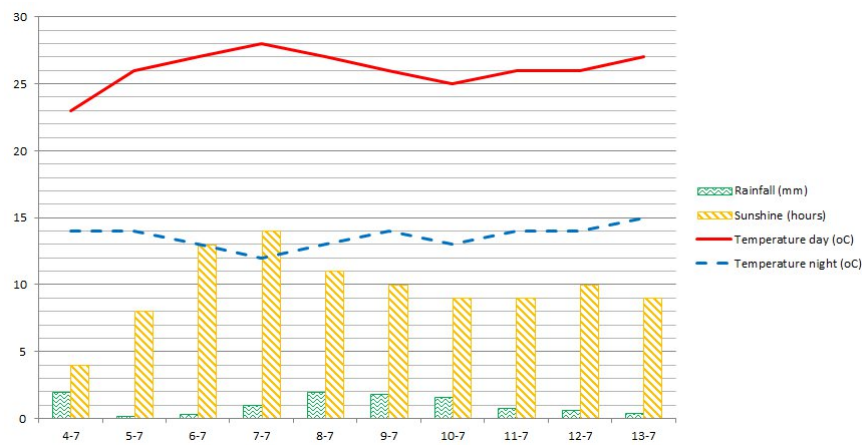
If choice b is selected set score to 1.

26. Equation: $y = 0,5x - 1$

- (a) The equation represents a sloping line.
- (b) The equation represents a horizontal straight line.
- (c) The equation represents a vertical straight line.

If choice a is selected set score to 1.

27. Calculate the average sunshine hours from the fourth till the eighth day of July.



- (a) 10 hours
- o (b) 8 hours
- o (c) 9 hours

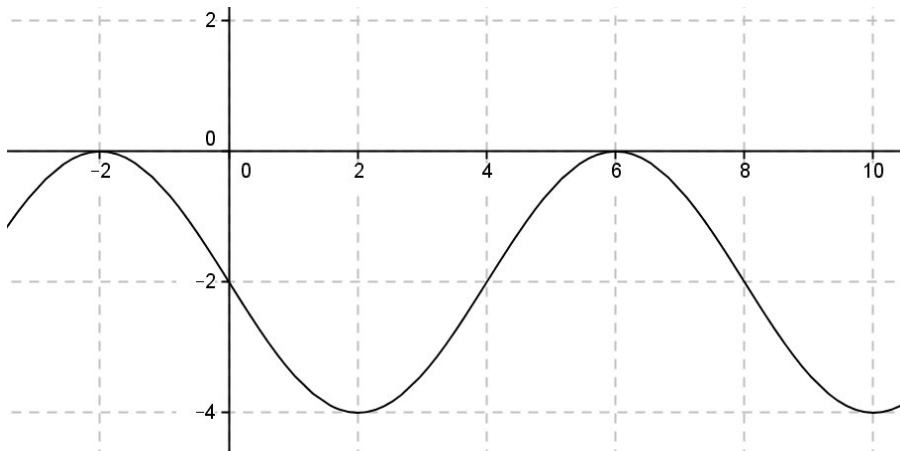
If choice a is selected set score to 1.

28. Determine the tan of the straight line ($y=ax+b$) with the x-axis, that passes through the points (5,24) and (3,4).

- o (a) $\tan = a = 1/10$
- o (b) $\tan = a = 1/21$
- (c) $\tan = a = 10$

If choice c is selected set score to 1.

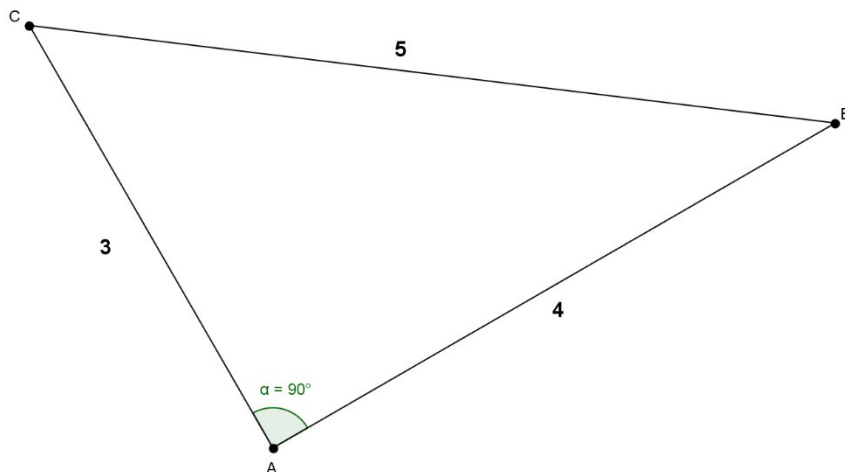
29. Determine the function of the graph below.



- (a) $y = -2\sin(0,25 \pi xt + \pi) + 2$
- (b) $y = -2\sin(0,25 \pi xt + \pi) - 2$
- (c) $y = 2\sin(0,25 \pi xt + \pi) - 2$

If choice c is selected set score to 1.

30. Calculate the shortest rectangular side if the hypotenuse has a length of 45 cm.

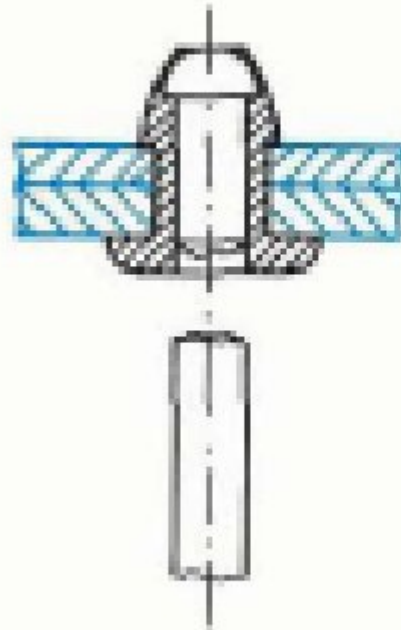


- (a) 36 cm
- (b) 75 cm
- (c) 27 cm

If choice c is selected set score to 1.

- 31.** Which rivet do we use to fasten two aluminum plates, one of 1 mm and the other of 2 mm thickness. The hole diameter is 4 mm.

Rivets



$d = 3$

l

b

$d = 4$

l

aluminum rivet

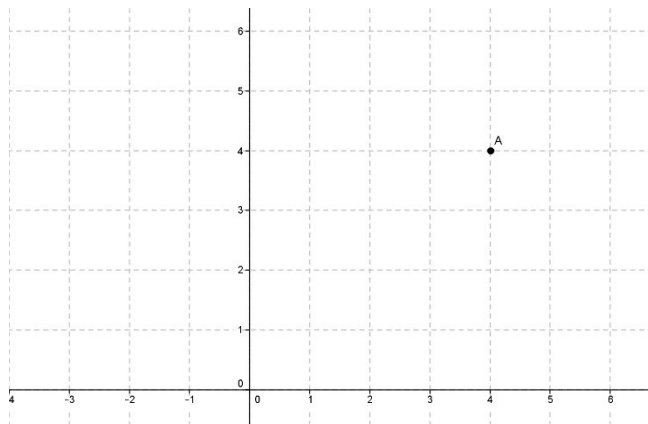
3,5	1 - 1,5	4
4,5	1,5- 2,5	5
5,5	2,5- 3,5	6
6,5	3,5- 4,5	7
8	4,5- 6,5	8
10	6,5- 8	10
12	8 -10	12

steel rivet

- (a) The length of the rivet is 8mm.
- (b) The length of the rivet is 6mm.
- (c) The length of the rivet is 5,5mm

If choice b is selected set score to 1.

32. Determine the polar coordinates of point A in the drawing.



- (a) $(2\sqrt{4}) ; -45$ degrees)
- (b) $(4\sqrt{2}) ; 45$ degrees)
- (c) $(4\sqrt{2}) ; -45$ degrees)

If choice b is selected set score to 1.

***If assessment score is 75% to 100% Pass
If assessment score is 0% to 74% Fail***