

Sample admission test:

Sample tasks in the admission test. There may be more or fewer tasks in the test.

Dot represents a decimal point, cross represents multiplication.

1. Order the numbers from the smallest to the largest: (a) $4\frac{1}{3}$, (b) 4.7, (c) 75% of 6, (d) $\frac{28}{6}$, (e) $|-4.75|$.

2. Write the result.

$$(-1.5)^2 + (-1.5) \times (-1\frac{1}{3})$$

3. Farmer Tom has a field $45m \times 60m$. He wishes to divide it into square yards of equal size. What is the biggest size the yards could be?

4. Find the smallest positive integer which is exactly divisible by 15 and 25.

5. There are 30 houses on a street. 16 of them have a burglar alarm, 22 houses have a security door, and 10 houses have both a burglar alarm and a security door. How many houses on the street have a burglar alarm but not a security door?

6. An alloy is made from tin, zinc, and lead in a ratio 15 : 4 : 1. How much tin is required to make 5 tonnes of the alloy?

7. Which equality is an expression of the variable b from the relation $S = 2 \times (a + b)$?

a) $b = S - 2a$

b) $b = \frac{S-2a}{2}$

c) $b = \frac{S-a}{2}$

8. State the next three members of this sequence 2, 3, 5, 8, 12, 17,

9. If you borrow money from a bank, you must repay the loan in full, and also pay an additional charge called interest. Simple interest is interest that is calculated each year as a fixed percentage of the original amount borrowed. Find the total amount needed to repay a loan of \$ 40 000 borrowed at 9 % p. a. simple interest for 5 years.

10. Solution of equation $3x+5 = 3 - x$ is

a) rational number

b) natural number

c) integer

11. How many solutions does this equation have: $x^2 = 121$?

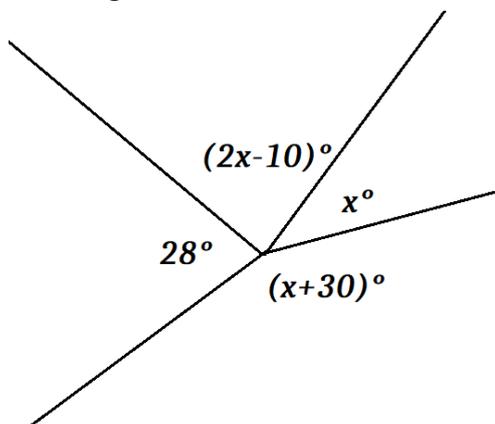
12. The graph of function $y = 3x - 1$ passes through the point

a) [1, 4]

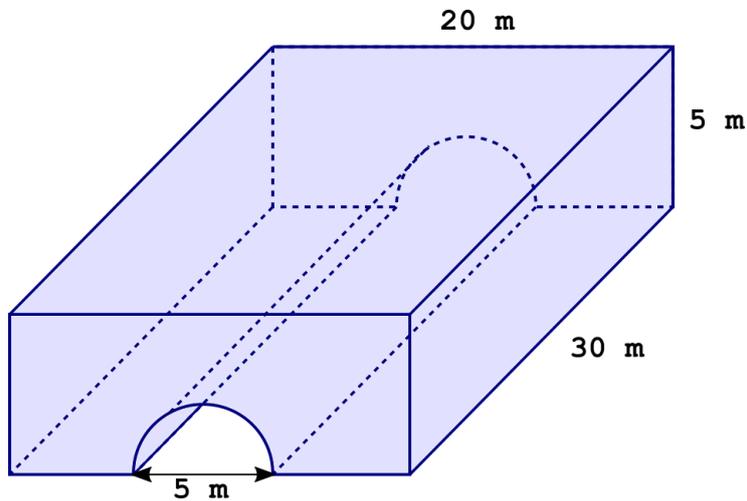
b) [-1, 2]

c) [0, -1]

13. Find the size of angle x :

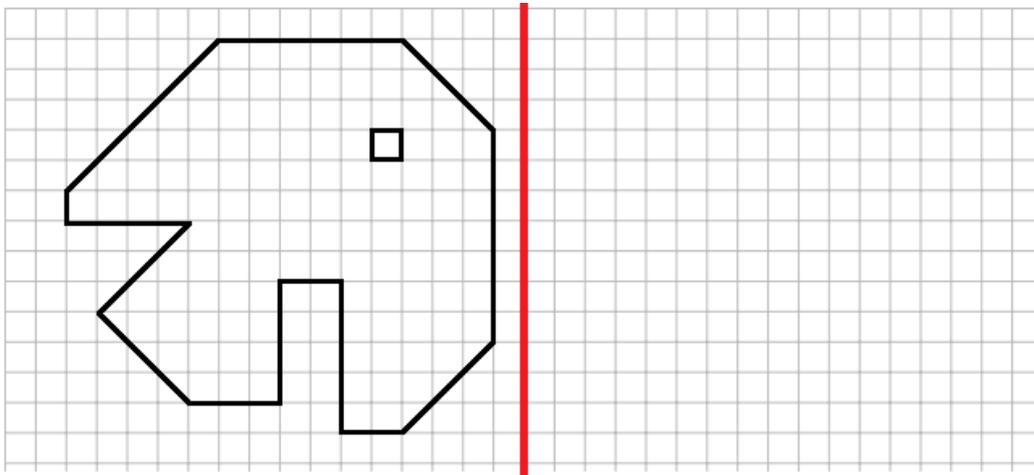


14. Find the amount of water in this aquarium, giving your answer in hectolitres.



15. At a local cinema, one movie session sold 20 adult tickets, 16 concession tickets, and 9 child tickets. One person from the audience has left the cinema room after the movie has started. Find the probability that this person has a child or concession ticket.

16. Reflect the figure in the red mirror line:



17. The guests of the hotel in Paris were asked which country they lived in. The results are shown in the vertical column graph. How many guests were surveyed and what percentage of the guests surveyed were from Spain?

Hotel guests

