

Math 4d, Homework 6.



1. Fill up the empty places for the equality to hold (distributive property):

a. $5 \cdot (4 + 7) = 5 \cdot \square + \square \cdot 7$

b. $\square \cdot (11 - 7) = \square - 21$

c. $(\square - \square) \cdot 20 = 80 - 60$

d. $(35 + a) \cdot 2 = \square + 2a$

e. $10 \cdot (\square - \square) = 140 - 10x$

f. $9c + \square = (9 + 1)c$

2. Two buses leave from the same bus station following two different routes. For the first one it takes 48 minutes to complete the roundtrip route. For the second one it takes 1 hour and 12 minutes to complete the round trip route. How much time will it take for the buses to meet at the bus station for the first time after the have departed for their routes at the same time?
3. Boxes that are 30 cm tall are being piled next to boxes that are 40 cm tall. What is the least height at which the two piles will be the same height?
4. Is number a divisible by number b ? if yes, find the the quotient.

1) $a = 2 \cdot 2 \cdot 3 \cdot 7 \cdot 7$, $b = 2 \cdot 2 \cdot 11$;

4) $a = 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5 \cdot 19 \cdot 23$, $b = 2 \cdot 2 \cdot 3 \cdot 5$;

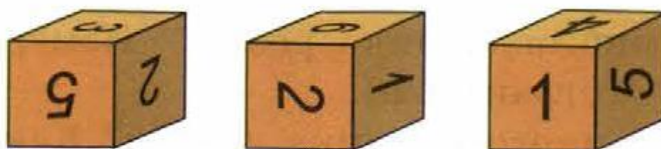
2) $a = 2 \cdot 3 \cdot 5 \cdot 13$, $b = 5 \cdot 13$;

5) $a = 2 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 5 \cdot 11 \cdot 13$, $b = 405$;

3) $a = 3 \cdot 5 \cdot 5 \cdot 11 \cdot 17$, $b = 3 \cdot 5 \cdot 17$;

6) $a = 2 \cdot 3 \cdot 7 \cdot 11 \cdot 13 \cdot 29$, $b = 2002$.

5. On each side of the cube, digits from 1 to 6 are drawn. Three positions of the cube are shown on the picture. What is the digit on the bottom of the cube in each case?

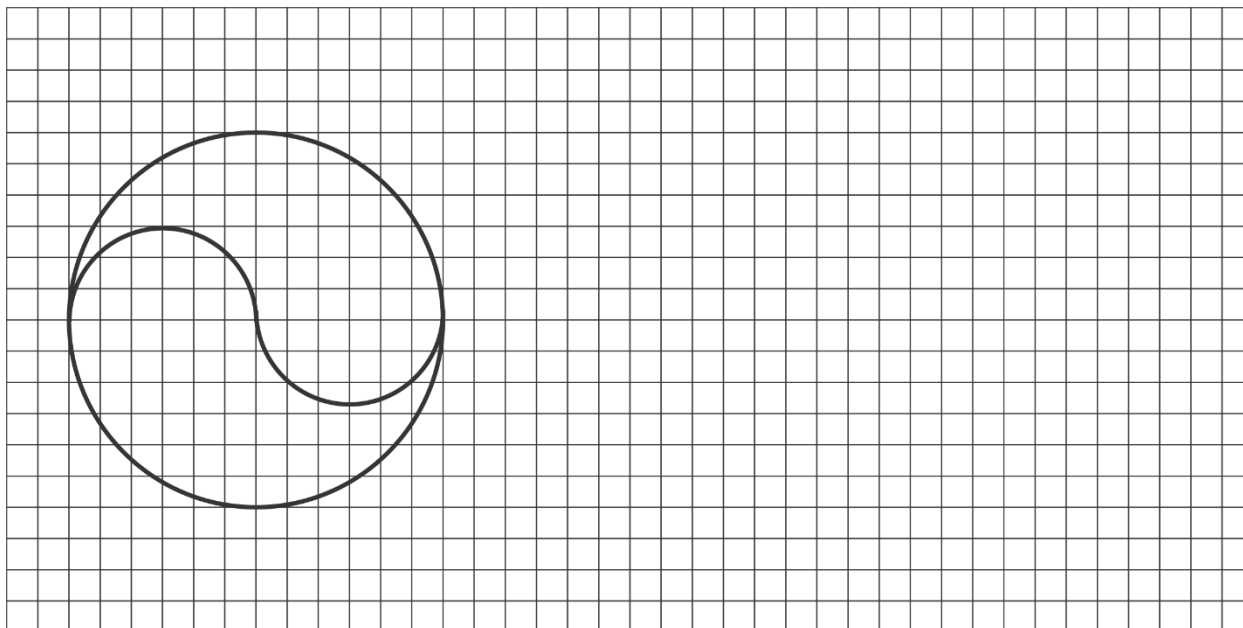


6. 3 identical books and 5 identical notebooks costs 95 dollars, but 1 same book and 2 same notebooks cost 33 dollars. How expensive are one book and one notebook?
7. Evaluate by the most convenient way:

$17 \cdot 34 + 26 \cdot 17 + 13 \cdot 60$;

$4 \cdot 45 + 4 \cdot 45 + 6 \cdot 55 + 6 \cdot 45$;

8. Copy the figure below, use compass:



9. Copy the angles, measure them with protractor.

