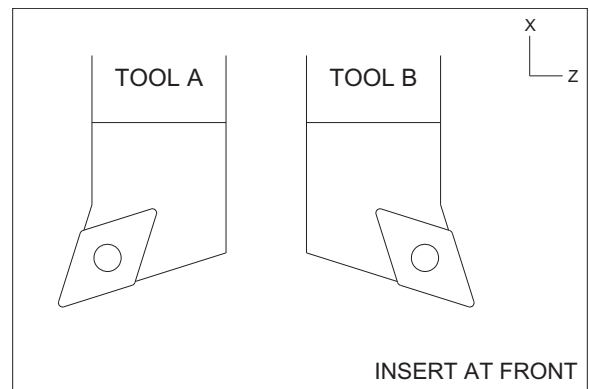


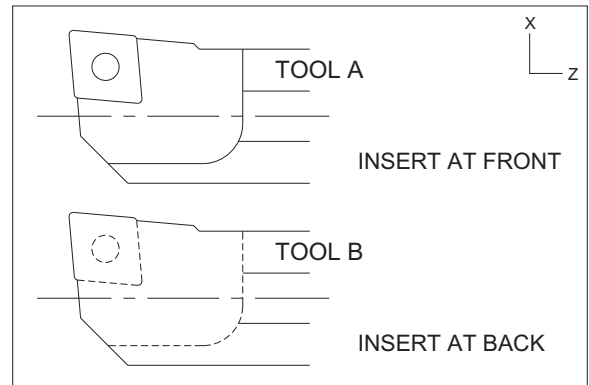
All questions below require at least an average knowledge of tools used on CNC lathes. Based on Kennametal® tools, the identification for other tools can easily be adapted. Questions relate to common tools catalogue only.

#	Question	Answer
1.	What is the relief angle of a DNMG turning insert?	
2.	Is there a chipbreaker built in a TNMA insert? Explain the answer	
3.	Identify at least three common turning inserts by their included angle:	Insert 1 = Insert 2 = Insert 3 = Insert 4 =
4.	Match the inserts in q. 3 with appropriate insert shape identification letter:	Insert 1 = Insert 2 = Insert 3 = Insert 4 =
5.	How many cutting edges are on a WMNG insert?	
6.	Can a CNMG-432 insert be used in a left hand toolholder? Why?	
7.	What is the difference between DCGNL-164C and DCGNL-164D toolholders?	
8.	Can a VNMG-432 insert be used in a MVJNL-164D holder? Explain the answer	
9.	What is the thickness of a SNMG-643 insert?	
10.	What insert shape does DDPNN-164D toolholder accept? Provide a complete example of such an insert	

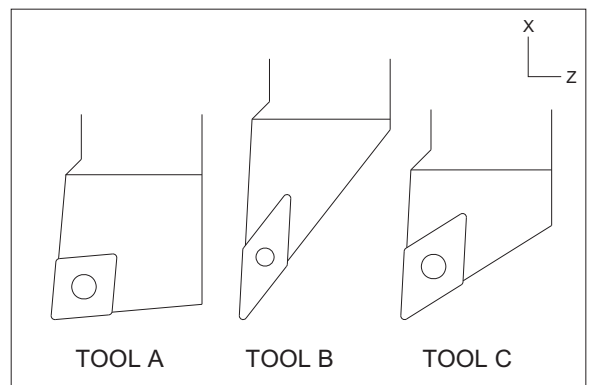
11. Of the two turning tools shown on the right, identify the right hand holder and the left hand holder



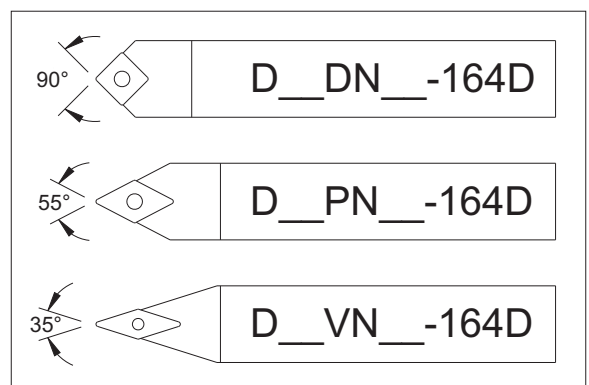
12. Of the two boring bars shown on the right, identify the right hand bar and the left hand bar



13. Identify the three turning tools shown on the right by their insert shape letter and the included angles



14. The three turning tools shown on the right are identified by their catalogue number. The *second* and *fifth* letter is missing and replaced by an underline. Fill the missing letters for each tool



15. A toolholder is identified as MDJNR-163D - answer the following questions - (watch 15-f and 15-g):

15-a Define the meaning of the letter M _____

15-b Define the meaning of the first letter D _____

15-c Define the meaning of the letter J _____

15-d Define the meaning of the letter N _____

15-e Define the meaning of the letter R _____

15-f Define the meaning of the digit 1 _____

15-g Define the meaning of the digit 6 _____

15-h Define the meaning of the digit 3 _____

15-i Define the meaning of the last letter D _____

16. The last three digits of an insert are 543 - identify the *meaning* and *value* of each digit:

16-a The digit 5 identifies _____

16-b The digit 4 identifies: _____

16-c The digit 3 identifies: _____

17. An ISO insert is identified as VBMT 11 03 08 - answer the following questions:

17-a Define the meaning of the letter V _____

17-b Define the meaning of the letter B _____

17-c Define the meaning of the letter M _____

17-d Define the meaning of the letter T _____

17-e Define the meaning of the digits 11 _____

17-f Define the meaning of the digits 03 _____

17-g Define the meaning of the digits 08 _____

18. An ANSI turning insert is identified as CNMG-432 - answer the following questions:

18-a Define the meaning of the letter C _____

18-b Define the meaning of the letter N _____

18-c Define the meaning of the letter M _____

18-d Define the meaning of the letter G _____

18-e Define the meaning of the digit 4 _____

18-f Define the meaning of the digit 3 _____

18-g Define the meaning of the digit 2 _____