Define what is meant by the phrase design for manufacturability (or DFM):

Consciously trying to design parts that can be manufactured for the lowest ____________ while meeting the required ____________ intent and ____________ factors.

Circle the answer that achieves the DFM goal of reducing part cost:

1. Use larger / smaller part tolerances
2. Use fewer / more finished surfaces
3. Use coarser / finer surface finishes
4. Use fewer / more dimension datums
5. Use arbitrary / nominal feature dimensions
6. Use stronger / weaker material
7. Use tapped / thru-bolted clearance holes
8. Use screw / bolt holes
9. Use blind / thru holes
10. Specify cone-bottomed / flat-bottomed holes
11. Make the part larger / smaller
12. Design parts for min / max raw-stock removal
13. Design parts to use larger / smaller cutting tools
14. Design parts to use cutting tools with larger / smaller L:D ratios
15. Design parts around custom / standard cutting tool sizes
16. Design parts with / without chamfers and fillets
17. Avoid / use mirror image parts
18. Use clearance / line fits for fasteners holes
19. Always / never design OTS parts
20. Specify slots or pockets with round / square corners when using traditional mfg. equipment
21. Consider / ignore room for assembly tools
22. Always place fastener threads in shear / tension
23. Use fasteners / pins for locating parts with respect to each other
24. Specify (8) ¼-20 UNC threads in aluminum / (8) ¼-28 UNF threads in steel / either
25. Specify (8) ¼-28 UNF threads in steel / (8) ¼-28 UNF threads in titanium / either
26. Specify (8) ¼-20 UNC threads in aluminum / (8) 4-40 UNC threads in aluminum / either
27. Specify (8) ¼-28 UNF threads in steel / (4) 2-64 UNF threads in aluminum / either
28. Specify (8) ¼-20 threads in aluminum / (8) M6x1.0 threads in aluminum / either
29. Specify (8) ¼-20 UNC threads in aluminum / (8) 1/2-13 UNC threads in aluminum / either
Define what is meant by the phrase design for manufacturability (or DFM):

Consciously trying to design parts that can be manufactured for the lowest cost while meeting the required design intent and service factors.

Circle the answer that achieves the DFM goal of reducing part cost:

1. use **larger** / **smaller** part tolerances
2. use **fewer** / **more** finished surfaces
3. use **coarser** / **finer** surface finishes
4. use **fewer** / **more** dimension datums
5. use arbitrary / **nominal** feature dimensions
6. use **stronger** / **weaker** material
7. use tapped / **thru-bolted clearance** holes
8. use screw / **bolt** holes
9. use blind / **thru** holes
10. specify **cone-bottomed** / flat-bottomed holes
11. make the part **larger** / **smaller**
12. design parts for **min** / **max** raw-stock removal
13. design parts to use **larger** / **smaller** cutting tools
14. design parts to use cutting tools with **larger** / **smaller** L:D ratios
15. design parts around **custom** / **standard** cutting tool sizes
16. design parts with / **without** chamfers and fillets
17. **avoid** / use mirror image (versus identical) parts
18. use **clearance** / line fits for fasteners holes
19. always / **never** design OTS parts
20. specify slots or pockets with **round** / square corners when using traditional mfg. equipment
21. **consider** / ignore room for assembly tools
22. always place fastener threads in **shear** / **tension**
23. use fasteners / **pins** for locating parts with respect to each other
24. specify (8) **¼-20** UNC threads in aluminum / (8) **¼-28** UNF threads in steel / either
25. specify (8) **¼-28** UNF threads in steel / (8) **¼-28** UNF threads in titanium / either
26. specify (8) **¼-20** UNC threads in aluminum / (8) **4-40** UNC threads in aluminum / either
27. specify (8) **¼-28** UNF threads in steel / (4) **2-64** UNF threads in aluminum / either
28. specify (8) **¼-20** threads in aluminum / (8) **M6x1.0** threads in aluminum / **either**
29. specify (8) **¼-20** UNC threads in aluminum / (8) **1/2-13** UNC threads in aluminum / **either**