# Final Test

# Note: Record your answers on the last page

Date: Name:

Grade: /46 Student #

1. Define the term Rim Speed.
2. 2 + 2= .
3. How much would it cost to cover a floor 9m x 6m with a carpet valued at $13.00 per square meter?
4. 3/4 + 7/8 = .
5. Change 456mm to m.
6. The total height of a table is made up of the following dimensions: 1 ¾”, 1/8”, 1’ 7 ½”, 5/16”. How high is the table in inches?
7. Divide $144.00 between two persons at a ratio of 5:7. (12 parts)
8. What is the optimum rim speed for a woodworking cutterhead?
9. What is the diameter of a pulley, which revolves at 225 RPM if it is driven by a 6” pulley running at 900 RPM?
10. Determine the rim speed of a 6” shaper knife running at 7200 RPM.
11. An edge sander has a driving wheel 6” dia. And an idling wheel 3” dia. The center to center distance between these wheels is 84”. What length of belt is required? (round to 2 decimal places)
12. A load of panel stock is .858m high. If each sheet is 6mm thick, how many sheets are in the pile?
13. If one inch equals 25.4 mm what does 19.05 mm equal in inches? (show as a fraction)
14. A piece of lumber is 4 m long. How may cuts, 35 cm long can be cut from it if 3 mm is allowed for each saw cut?
15. You are to calculate the total glue requirements for a veneer run as follows:

Quantity: 47- three-ply panels

Finish size: 28” x 21” (add 1” to length & width for rough size)

Coverage = 20 grams/ sqft

Waste = 10%

2:1 ratio of resin & water respectively

1. 344 panels 18 ¾” x 20 ½” x 5/4 = ? BF
2. Sarah and Kyle “thought once and cut twice” too many times. As a result, we need to reproduce:

A total of ***47 pieces***, 3-ply tops (consisting of):

1 - Particle core (”) 23” x 17” add 20% waste @ $0.32/sqft

1 - Face veneer 23” x 17” add 100% waste @$0.45/sqft

1 - Back veneer 23” x 17” add 100% waste @$0.16/sqft

4 - Headers 33” x 2 ½” x 4/4 add 60% waste @$2.92/bf

**What is the cost of their mistake?**

* Fill in the cost of each part for the whole job. Ie. Particle core cost x 47 pcs for the “core cost”.
* **(Note**: - Calculate the sizes as is, do not change to rough sizes.)

1. Based on the drawing shown, identify the points listed. Work counter clockwise. (1/2 mark per co-ordinate) (7 marks total)



**Answers: (all questions worth 2 marks unless otherwise noted.)**

1.

2. 9.

3. 10.

4. 11.

5. 12.

6. 13.

7. 14.

8.

15. Total Square footage to cover: (4 marks total)

Total Grams of Glue (with waste):

Resin: g

Water: g

16. /2

17. (5 marks)

Core cost (all): **Total Cost (all)**

Face veneer cost (all):

Back veneer cost (all):

Solid cost (all):

18. Fill in the **Absolute co-ordinates** and **Incremental co-ordinates** in their respective charts on page #3. (7 Marks)

**Formulas**

Area = Length x Width

10 mm = 1 cm 100 cm = 1 m

Pulley Ratio = Drive (motor)/ Driven (Arbor)

Rim Speed = x rpm

Sander belt = ( ) + () + (2 x center to center)

Board foot =

**Answer key**

1. The peripheral rate of travel of a blade or cutter head expressed in lineal feet per minute (LFM).
2. 4
3. $702.00
4. 1
5. 0.456 m
6. 21.69” or 21-11/16”
7. 60 , 84
8. 14,000 LFM
9. 24”
10. 11,309.73 LFM
11. 182.14”
12. 143 sheets
13. ¾”
14. 11 pieces
15. Glue calculations
    1. Total sqft = 416.47 sqft
    2. Grams of glue w/ waste = 9,162.39 g
    3. Resin = 6,108.26 g
    4. Water = 3,054.13 g
16. 1,147.7864583333 bdft
17. Panel cost
    1. Core = $49.01
    2. Face veneer = $114.86
    3. Back veneer = $40.84
    4. Solid headers = $503.21
    5. Total cost = $707.91 ($707.92 if using rounded cost)
18. Co-ordinates see attached graph.