Handout 05.13: Cost Per Wear Worksheet and Quality Inspection Checklist

Name: _____ Date: _____ Station: _____

Lesson 5.13, one day. Every dollar figure on this sheet is written for class and marked [update].

The formula: cost per wear = price divided by the number of times worn. The answer is in dollars per wear.

Word bank: price, wear, divide, seam, thread, button, strong Turkish: fiyat, giyme, bölmek, dikiş yeri, iplik, düğme, sağlam Portuguese: preço, uso, dividir, costura, linha, botão, forte Spanish: precio, uso, dividir, costura, hilo, botón, fuerte

LSA

Part 1. The three worked problems

Show the division. Write the unit on every answer.

(a) The jeans. A pair of jeans costs $60 [update]. You wear them 200 times before they wear out.

$60 ÷ 200 wears = $_____ per wear

(b) The shirt. A shirt costs $15 [update]. You wore it 5 times and then stopped wearing it.

$15 ÷ 5 wears = $_____ per wear

(c) The coat. A winter coat costs $90 [update]. You wear it for 3 winters.

First you have to estimate. How many times do you wear a winter coat in one winter?
_____ times

So 3 winters is 3 × _____ = _____ wears

$90 ÷ _____ wears = $_____ per wear

Which of the three cost the most per wear? _____

Which one had the lowest price? _____

Write one sentence about what those two answers together tell you:
_____

Part 2. What makes a garment last

Fill in what a good one looks like and what a fail looks like.

Factor	What to look for	A good one	A fail
1. Fiber	Read the label. What is it made of, and in what percentages?		
2. Seam type	Look inside. One row of stitching, two rows, or a raw edge wrapped inside?		
3. Stitches per inch	Put the ruler on a seam and count one inch.	_____ per inch is good	_____ per inch is low
4. Reinforcement at stress points	Look where the body pulls: pocket corners, belt loops, underarms, knees,		

	where a strap joins.		
5. Buttons and closures	Pull the button gently. Run the zipper.		

Seam words to know

- **Single-needle seam:** one row of stitching. It is the first seam to open.
- **Double-needle seam:** two parallel rows. It holds much better.
- **Flat felled seam:** the raw edges are folded and wrapped inside, then stitched through. The strongest of the three. Look at the outside side seam of a pair of jeans.
- **Serged edge:** thread looped over the raw edge to stop it fraying. That is a finish, not a seam. A serged edge alone does not hold two pieces together.
- **Bar tack:** a short, dense line of stitches at a stress point, like the corner of a pocket.
- **Stress point:** anywhere the body pulls on the garment.

Part 3. Quality inspection, four garments

Run all five checks on each garment your station gets. Check the box if the answer is good. Write the number where a number is asked for.

Garment 1: _____

Check	Finding	Good?
Fiber (from the label)		[ ]
Seam type (single, double, flat felled, or serged only)		[ ]
Stitches per inch	_____ per inch	[ ]
Reinforcement at a stress point (name the point)		[ ]
Buttons and closures		[ ]

One sentence: this garment will or will not last, because _____

Garment 2: _____

Check	Finding	Good?
Fiber (from the label)		[ ]
Seam type		[ ]
Stitches per inch	_____ per inch	[ ]
Reinforcement at a stress point (name the point)		[ ]

Buttons and closures		[ ]

One sentence: this garment will or will not last, because _____

Garment 3: _____

Check	Finding	Good?
Fiber (from the label)		[ ]
Seam type		[ ]
Stitches per inch	_____ per inch	[ ]
Reinforcement at a stress point (name the point)		[ ]
Buttons and closures		[ ]

One sentence: this garment will or will not last, because _____

Garment 4: _____

Check	Finding	Good?
Fiber (from the label)		[ ]
Seam type		[ ]
Stitches per inch	_____ per inch	[ ]
Reinforcement at a stress point (name the point)		[ ]
Buttons and closures		[ ]

One sentence: this garment will or will not last, because _____

My ranking

Most likely to last, 1, to least likely, 4. Write one reason for each rank.

Rank	Garment	Reason
1		
2		
3		
4		

Part 4. The trade-off: price now against cost over time

Two garments, two different people. Compute both.

Garment 2, the thin t-shirt: $8 [update]. Garment 1, the heavy sweatshirt: $44 [update].

Person 1: a student who walks to school and will wear it four days a week for two winters

About how many wears in two winters? _____ wears

Garment	Price	Wears	Cost per wear
The $8 t-shirt	$8		$
The $44 sweatshirt	$44		$

Verdict, one sentence: _____

Person 2: someone who needs a shirt for one concert

About how many wears? _____ wears

Garment	Price	Wears	Cost per wear
The $8 t-shirt	$8		$
The $44 sweatshirt	$44		$

Verdict, one sentence: _____

The point in your own words: cost per wear only answers the question once you know _____.

Exit card

3 things you would check on a garment before buying it:

1. _____ 2. _____ 3. _____

2 cost-per-wear numbers you computed today, with units:

$_____ per wear and $_____ per wear

1 item in your own closet that you now think was a good buy or a bad buy, and why, in six words:

Grade 8 stretch (optional, on the back)

1. At what number of wears does the $44 sweatshirt become cheaper per wear than an $8 t-shirt worn 10 times? Show your work.
2. The $8 t-shirt survives 10 washes. The $44 sweatshirt survives 100. If you need a sweatshirt for 100 washes, what does each option actually cost you in total? Which is cheaper?
3. Pick a coat you own. Estimate its price and the wears per winter. What is its cost per wear per winter?

Teacher key

Part 1

(a) $60 ÷ 200 = **$0.30 per wear**.

(b) $15 ÷ 5 = **$3.00 per wear**.

(c) The estimate is the student's. At about 60 wears per winter: 3 × 60 = 180 wears, $90 ÷ 180 = **$0.50 per wear**. Accept any reasonable estimate between about 40 and 90 wears per winter with the division done correctly on the student's own number. A student who estimates 50 gets 150 wears and $0.60 per wear, which is also correct. Most per wear: the $15 shirt at $3.00. Lowest price: the $15 shirt. The sentence should say something like "the cheapest thing to buy was the most expensive thing to own," or "price does not tell you what something costs you."

Watch for: dividing wears by price (200 ÷ 60 = 3.33 wears per dollar). Not wrong as a rate, but not the one a buyer compares. Say so and require dollars per wear.

Part 2

Factor	A good one	A fail
Fiber	Cotton or a cotton-rich blend for comfort and durability; wool for warmth; a blend for wash durability; percentages printed	No label; "cotton blend" with no percentages; a garment that is mostly elastane in a place that takes stress
Seam type	Double-needle or flat felled on any seam that carries load	Single-needle on a load-bearing seam; a serged edge with no seam behind it
Stitches per inch	10 to 12	8 or fewer
Reinforcement	Bar tacks at pocket corners and belt loops, a gusset under the arm, a doubled knee, a reinforced strap join	Nothing at any stress point, especially where a strap or pocket joins
Buttons and closures	Four to six passes of thread, a shank so the button sits above the fabric, a knot that holds; a zipper that runs smoothly both ways	A button held by two loose threads, no shank, a knot cut flush; a zipper that catches or separates

Part 3

There is no single right answer; the answer depends on the four garments in the room. Score on process, not on outcome: did the student count stitches with the ruler on a structural seam, name a seam type, and find a real stress point. The intended ranking for the suggested set is (1) the jeans, (2) the heavy cotton sweatshirt, (3) the fast-fashion

blouse, (4) the thin promotional t-shirt, but a student who ranks the sweatshirt first with good reasons is correct.

Part 4

Person 1, at four days a week for about 24 weeks of cold weather over two winters, roughly 190 to 200 wears. Accept any estimate in that range.

- $8 ÷ 200 = $0.04 per wear, but the thin t-shirt will not survive 200 wearings, which is the whole point; a student who says so in the verdict has the best answer.
- $44 ÷ 200 = $0.22 per wear.
- Verdict: the sweatshirt, because the t-shirt's $0.04 is a number that assumes something impossible.

Person 2, one concert, 1 to 3 wears.

- $8 ÷ 1 = $8.00 per wear. $44 ÷ 1 = $44.00 per wear.
- Verdict: the t-shirt, or better, borrow or wear something you own.

The point: cost per wear only answers the question once you know **who is wearing it and how often**.

Grade 8 stretch

1. The $8 t-shirt worn 10 times is $0.80 per wear. The $44 sweatshirt beats $0.80 per wear at 44 ÷ 0.80 = 55 wears. So at 56 wears or more, the sweatshirt is cheaper per wear.
2. For 100 washes: the t-shirt needs 10 shirts at $8 = $80. The sweatshirt is one at $44. The sweatshirt is cheaper by $36, and that is before counting the waste of nine discarded shirts, which is the Lesson 5.14 connection.
3. Student's own numbers. Check the division and the unit.