

No calculators

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x + 12 = kx - k^2$$

$$\cancel{k^2} + 12 = \cancel{kx} - \cancel{kx}$$

$$3(x + 4) = k(x - 2)$$

$$2 + 12 = x - 3x$$

$$\frac{M}{2} = -\frac{2x}{2}$$

$$x = -7$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2) = 1-x-x^2+x^3$$

$$1-x-x^2+x^3$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+15}{15} - \frac{9x+4}{15}$$

$$\frac{x+1}{15}$$

$$5. \frac{2x+3}{3} - \frac{3x+2}{5} = 3$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\boxed{\hspace{2cm}}$$

5. Calculate

$$\frac{1}{12} \cdot \frac{1}{12} = \frac{1}{144}$$

$$4 \cdot \frac{1}{3} = \frac{4}{3}$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$\frac{(20)}{\frac{1}{12}} \cdot \frac{1}{12} = 240$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\boxed{\hspace{2cm}} \text{ hours}$$

7. Solve for x and y

$$\frac{30}{3} = \frac{15}{5}$$

$$x = 25/4$$

$$3x - 5y = -2$$

$$x + y = 10$$

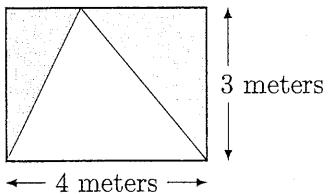
$$x = 10 - y$$

$$3(10-y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$30 - 8y = -2 \quad \boxed{y = \frac{10}{4}, \frac{10}{4} - \frac{15}{4} = \frac{40}{4} - \frac{15}{4} = \frac{25}{4}}$$

9. What is the area of the shaded region?



$$12 \text{ square meters}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\boxed{\hspace{2cm}} \text{ $}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\boxed{\hspace{2cm}} \%$$

boxes

3 / 10

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If you score 8–10, congratulations! You are ready for Math 34A.

Mario Torres : 8892408

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{kx - 2k - 4}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\cancel{1+2x+x^2} \quad 1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{10x}{15} - \frac{9x+6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$3.33$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

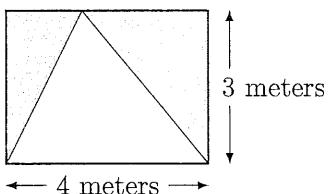
$$x =$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 250$$

9. What is the area of the shaded region?



$$8 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60\% \quad \%$$

Put your final answers in the

boxes

Score

4 / 10

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1. Solve for
- x
- in the equation

$$x = \frac{2kx - 4}{2}$$

$$3(x + 4) = k(x - 2)$$

$$\begin{aligned} 3x + 12 &= 2kx - 4 \\ -12 &\\ \underline{3x} &= \underline{2kx} - 12 \end{aligned}$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - 2x + x^2 + 1x - 2x^2 + x^3$$

$$1 - 1x - 1x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x + 3}{3} - \frac{3x + 2}{5}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\begin{array}{r} x \\ .25 \\ \times \frac{4}{3} \\ \hline .80 \\ \underline{-} \\ .80 \\ \hline 3.20 \end{array}$$

$$3.20$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for
- x
- and
- y

$$x = 6$$

$$y = 4$$

$$\begin{aligned} 3x - 5y &= -2 \\ 5x + y &= 1050 \end{aligned}$$

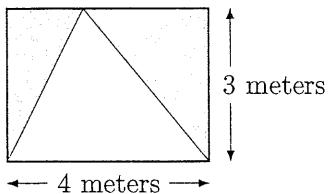
$$\begin{array}{r} 3x = 48 \\ \hline 8 \end{array} \quad \begin{array}{r} 6 \\ \hline 8 \end{array}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 7(100) = \$700 \\ \hline 3.50 \\ 700 - \frac{3.50}{2} = 3.50 \\ \hline 545 \\ 545 - \frac{2(200)}{2} = 200 \\ \hline 1245 \end{array}$$

$$\$ 1245$$

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200,000 \\ - 80,000 \\ \hline 120,000 \end{array}$$

60 %

boxes

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1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^2 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{9x+16}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

✓

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{15\frac{11}{12}}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

✓

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 4\frac{2}{3}$$

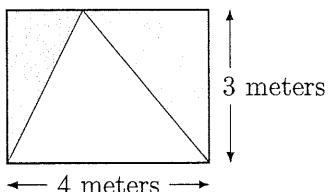
$$y = 5\frac{1}{3}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

✓

\$ 400

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

boxes

6 / 10

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1. Solve for x in the equation

X

$$3(x+4) = k(x-2)$$

$$x = \frac{k-6}{2}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^2 + x$$

X

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+3}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

✓

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

X

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

✓

7. Solve for x and y

$$x = 6$$

✓

$$3x - 5y = -2$$

$$y = 4$$

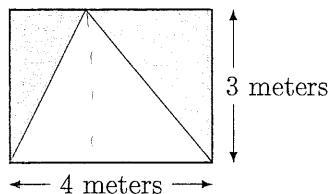
$$x + y = 10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

✓

9. What is the area of the shaded region?



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

✓

Put your final answers in the

Aionandra Jaurégui
5658604

Score

8 / 10

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1. Solve for x in the equation

$$x = \frac{k-12}{k+4} \quad 3(x+4) = k(x-2) \quad 3x + 12 = kx - 2k$$

$$\begin{array}{r} 3x + 12 = kx - 2k \\ -kx \quad -kx \\ \hline 12 = -3k \end{array}$$

$$x = \frac{12 + 2k}{-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5} = \frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\begin{array}{r} 25\% \\ | \\ \frac{1}{3} \quad | \quad \frac{4}{3} \\ | \\ \frac{3}{3} \quad | \quad \frac{4}{3} \end{array}$$

4.

5. Calculate

$$\boxed{?} \quad \frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{\hspace{2cm}}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

\rightarrow 50 mph \rightarrow 60 mph

$$50 \cdot 3 = 150$$

$$60 \cdot 2 = \frac{120}{270}$$

$$\begin{array}{r} 270 \\ -150 \\ \hline 120 \\ -120 \\ \hline 0 \end{array}$$

5 hours

7. Solve for x and y

$$\begin{array}{l} -5y = -2 - 3x \quad 3x - 5y = -2 \\ \hline -5 \quad -5 \quad x + y = 10 \\ -5 = -2 - 3x \quad 3x - 5 = -2 \\ \hline -5 \quad -5 \quad 3x + 10 + 5 = -2 \\ -5 \quad -5 \quad 3x + 15 = -2 \\ 3x + 15 = -2 \\ 3x = -2 - 15 \\ 3x = -17 \\ x = -\frac{17}{3} \end{array}$$

$$\boxed{x = 6}$$

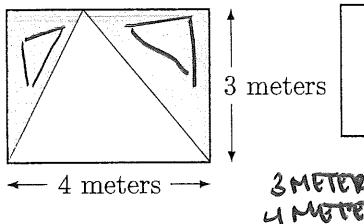
$$\boxed{y = 4}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} \$100 \quad 7 \text{ tons} \\ | \quad | \\ 850 \quad 200 \\ | \quad | \\ 100 \quad 200 \\ | \quad | \\ 100 \quad 150 \\ | \quad | \\ 50 \quad 100 \\ | \quad | \\ 100 \quad 150 \\ | \quad | \\ 1100 \quad 150 \\ | \quad | \\ 1100 \quad 150 \\ | \quad | \\ \$400.00 \end{array}$$

~~\$200~~ ~~\$100~~

9. What is the area of the shaded region?



$$\boxed{6.7 \text{ square meters}}$$

P:
A:

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\boxed{\hspace{2cm}} \%$$

boxes

Score

9 / 10

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If you score 8–10, congratulations! You are ready for Math 34A.

I have not done math since
year 10

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$x =$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2) = 1 - 2x + x^2 + x - 2x^2 + x^3 = 1 - x + x^3 - x^2 + x^3$$

~~$$1 - x + x^3 - x^2 + x^3$$~~

3. Put over a common denominator and simplify.

$$\frac{2x+3}{2x-3} - \frac{3x+2}{5} = \frac{2x}{1} - \frac{3x}{3}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\begin{aligned} & 12 \times \frac{4}{3} \times 0.25 \\ & 12 \times \frac{4}{3} \times \frac{1}{4} \\ & 12 \times \frac{1}{3} \\ & 4 \end{aligned}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{l} 150 \text{ miles} \\ 3 \text{ hours} \\ 150 \text{ miles} \\ \hline 450 \text{ miles} \end{array} \quad \begin{array}{l} 60 \text{ mph} \\ 120 \text{ miles} \\ 150 \text{ miles} \\ \hline 450 \text{ miles} \end{array} \quad \begin{array}{l} 5 \text{ hours} \\ x \end{array}$$

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

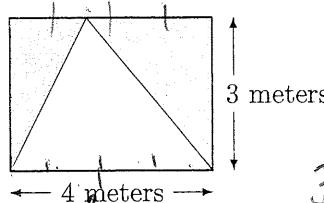
$$x =$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{l} 3.5 \times 200 = 700 \\ \$400 \\ x \end{array}$$

9. What is the area of the shaded region?



square meters

$$\begin{array}{l} 3^2 + 2.5^2 = \\ 9 + 6.25 = 15.25 \end{array}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\boxed{} \%$$

boxes

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If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2)$$

$x =$ 15

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

3

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

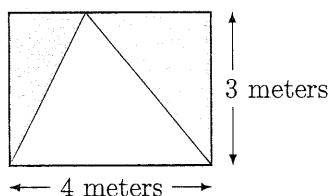
$x =$

$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 350

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60% %

Put your final answers in the

boxes

Roxy Virgen
5808506

Score

5 / 10

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1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12+k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{\hspace{2cm}}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

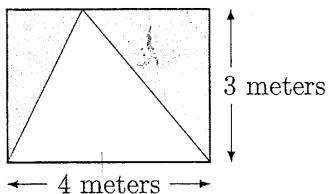
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\boxed{\hspace{2cm}}$$

\$

9. What is the area of the shaded region?



$$\boxed{\hspace{2cm}} \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$40\% \boxed{\hspace{2cm}}$$

boxes

7 / 10

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David Mehran

860721-0

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3(x+4) = k(x-2)$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2) \quad x^3 - x^2 - x + 1$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{5(2x+3)}{3} - \frac{3(3x+2)}{5}$$

$$\frac{x+11}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$25\% \text{ of } 16 \quad \frac{4}{3} \cdot 12 \\ 16$$

$$4$$

5. Calculate

$$\frac{20}{1} \times \frac{12}{191} \quad \frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)x^2\right)} \quad \frac{20}{16 - \left(\frac{1}{12}\right)^{-1}}$$

$$\frac{240}{191}$$

$$15 \frac{u}{12}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

150 miles

$$5$$

hours

7. Solve for x and y

$x =$ 6

$$3x - 5y = -2$$

$$x + y = 10$$

$$30 - 8y = -2 \quad x = 10 - y$$

$y =$ 4

$$3(10-y) - 5y = -2 \quad -8y = -32 \quad y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

exp. \$700

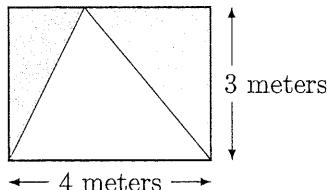
\$700

\$150 + 250

\$ 400

9. What is the area of the shaded region?

✓



6 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Put your final answers in the

Ashantue Garcia

6146708

Score

| | | |
|---|---|----|
| 3 | / | 10 |
|---|---|----|

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1. Solve for x in the equation

$$3x - kx = -14$$

$$3(x + 4) = k(x - 2)$$

$$\frac{3x + 12}{-12} = \frac{kx - 2}{-12}$$

$$3x = kx - 14$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 - x - 2x^2 + x^3$$

$$1 - 3x - 3x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{5+3} - \frac{3x+2}{5+3}$$

$$\frac{-x+1}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$25\% \cdot \frac{4}{3} \cdot 12 = \frac{25}{100} \cdot \frac{4}{3} \cdot 12$$

$$\left(\frac{25}{100} \cdot \frac{4}{3}\right) \cdot 12 = 0.12 \cdot 12 = \frac{4}{3} \cdot 12 = 16$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

50 mph for 3 hrs

$$50 \times 3 = 150$$

5 hours

$$\frac{270 - 150}{60} = 2 \text{ hrs}$$

$$60 \text{ mph} \times 2 = 120 \text{ miles left}$$

7. Solve for x and y

$$6y = 32$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x = 2 + 5y$$

$$x = \frac{-2 + 5y}{3} \quad -2 + 5y \quad 3 \quad x + y = 10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton.
She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \text{ tons of apples} = 100 \text{ per ton}$$

$$3.5 \text{ tons} = 200 \text{ per ton}$$

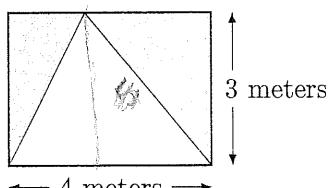
$$\text{Another ton for } 150$$

$$3.5 \times 100$$

$$100 \text{ per ton}$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000$$

$$80,000$$

$$120,000$$

$$\frac{120,000}{200,000} \times 100\%$$

$$60\%$$

$$80\%$$

%

Put your final answers in the

boxes

No calculators

Jasmine
4659892

Score

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.



1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - 2x^2 + x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$x+2$

4. What is 25% of $\frac{4}{3}$ of 12?

$\frac{48}{100}$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

16

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

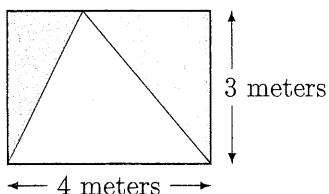
$x =$ 7

$y =$ 3

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60%

No calculators

Put your final answers in the

Erica Haggatt
6515324

Score

| | |
|--|--|
| | |
| | |

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for x and y

$$3x - 5y = -2$$

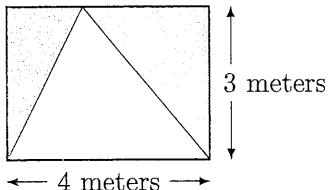
$$x + y = 10$$



8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 350

9. What is the area of the shaded region?



square meters



10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

12

%

Put your final answers in the

boxes

Score

 10 / 10

No calculators

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

8558934 - Connor Vaughan

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

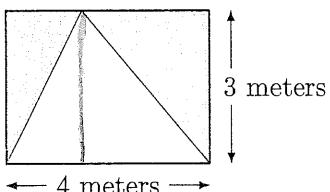
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60$$

%

Put your final answers in the

boxes

Score

9 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3x + 12 = kx - 2$$

$$12 + 2 = kx - 3x$$

$$3(x + 4) = k(x - 2)$$

$$14 = x(k - 3)$$

$$x = -4 + 2k$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2) \quad 1 - 2x + x^2 + x - 2x^2 + x^3$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{x+9}{15}$$

$$\frac{5}{3} \left(\frac{2x+3}{3} \right) \left(\frac{3x+2}{5} \right)$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\frac{3}{3} \cdot 4 \cdot \frac{4}{3} = \frac{16}{4} = 4$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{\sqrt{10}}{17} \text{ or } \frac{20}{\sqrt{10}^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

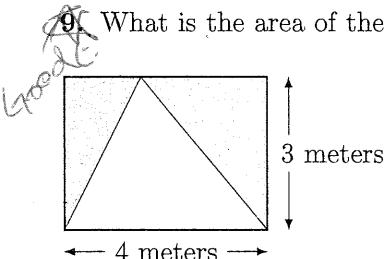
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} 3.5 \cdot 200 &= 700 \\ 4.5 \cdot 150 &= 675 \\ 2.5 \cdot 100 &= 250 \end{aligned}$$

$$\$1100 - 700 = 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

boxes

Score

1 / 10

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Timothy Paige
532603-8

$$(1 - 2x + x^2) + (1x - 2x^2 + 3x^3)$$

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$\frac{hx+2k}{k}$$

$$x =$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 1x - 1x^2 + 3x^3$$

3. Put over a common

denominator and sim-

$$\begin{array}{r} 10x+15 \quad 9x+6 \\ \cancel{2x+3} \quad \cancel{3x+2} \\ \hline 15 \quad 8 \end{array}$$

$$1x \quad 1x - 9$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$0.25$$

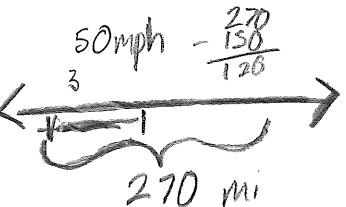
5. Calculate

$$\frac{16}{1} - \left(\frac{1}{12}\right)$$

$$\frac{20}{\left(16 - \left(\frac{1}{12} - \frac{1}{12}\right)^2\right)}$$

$$\frac{1}{12}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?



$$\text{hours}$$

$$150$$

$$\begin{array}{r} 60 \\ \hline 270 \\ - 240 \\ \hline 30 \end{array}$$

$$4.5$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

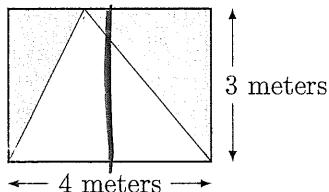
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ _____

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200,000 \\ - 80,000 \\ \hline 120,000 \end{array}$$

% _____

No calculators

Put your final answers in the

boxes

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

devin quinn

Score

4 / 10

- ✓ 1. Solve for x in the equation

$$3x + 12 = kx - 6x$$

$$x + 12 = kx$$

$$x = kx - 12$$

$$3(x + 4) = k(x - 2)$$

$$x = kx - 12$$

2. Multiply out and simplify. Check your answer.

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 + x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{x-9}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x-9}{15}$$

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{12}{1} \cdot \frac{4}{3} = \frac{48}{3}$$

16

9

$$\begin{array}{r} 12 \\ 3 \sqrt{48} \\ \underline{-3} \\ 18 \\ \underline{-15} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

36

- ✓ 5. Calculate

$$16 - 12 = 4$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take? $\frac{156}{120}$

$$3 \text{ hr} = 150 \text{ miles}$$

$$120 \text{ miles left}$$

$$2 \text{ hr}$$

$$5$$

hours

- ✓ 7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3(10 - y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$x = 14$$

$$y = -4$$

$$\begin{array}{r} 1.6 \\ \times 3 \\ \hline 48 \end{array}$$

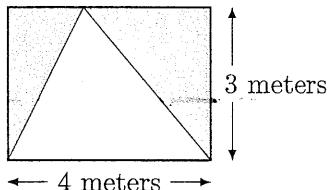
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\text{cost} = 700 \quad 3.5 \quad 700 - 150 =$$

$$\begin{array}{r} 700 \\ \times 3.5 \\ \hline 350 \\ + 150 \\ \hline 1100 \end{array}$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$b \times h \times \frac{1}{2}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200,000 - 80,000}{200,000} \times 100$$

$$\frac{120,000}{200,000}$$

$$\frac{12}{20} \frac{3}{4}$$

$$75\%$$

%

boxes

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$x =$$

$$3(x+4) = k(x-2)$$

$$\begin{aligned} 3x + 12 &= kx - 2k \\ 3x - kx &= -2k - 12 \\ x(3 - k) &= -2k - 12 \end{aligned}$$

2. ✓ Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$=$$

4. ✓ What is 25% of $\frac{4}{3}$ of 12?

$$=$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$=$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. ✓ Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

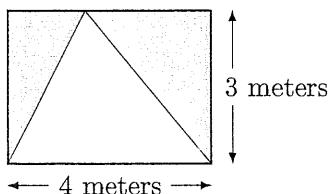
$$x = 10$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 350$$

9. What is the area of the shaded region?



$$4 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$%$$

Put your final answers in the

boxes

Carlos Zuniga

4965147

Score

5 / 10

No calculators

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

(5)

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$\frac{3x+12}{3} = \frac{kx-k^2}{12}$$

$$x + 4 = \frac{kx - k^2}{12}$$

$$x = \frac{kx}{3} - \frac{k^2}{12}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-3x^2)$$

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$x+9$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{10}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^{-1}}$$

$$2 \frac{5}{8}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{aligned} 50 \text{ mph} &\rightarrow 3 \text{ hrs} : 150 \text{ mi} \\ 60 \text{ mph} &\rightarrow \text{rest} \\ 270 \text{ miles} & \end{aligned}$$

$$5$$

hours

7. Solve for x and y

$$\begin{aligned} 4x - 5y &= -3x - 4y = -2 \\ x + y &= 10 \\ -6y &= -8 - 4x \\ \frac{-6y}{6} &= \frac{-8 - 4x}{6} \\ y &= \frac{-8 - 4x}{6} \end{aligned}$$

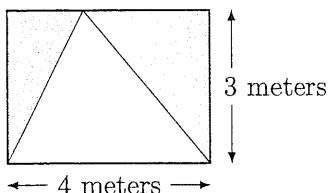
$$x = -2 + 6y$$

$$y = \frac{-8 - 4x}{6}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$\text{square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} \$200,000 &\text{ total} \\ \$80,000 &\text{ taxed} \end{aligned}$$

$$60 \%$$

boxes

7 / 10

No calculators

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x = kx - 2k - 12 \quad \frac{3x - kx}{3-k} = \frac{-2k - 12}{3-k}$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k \quad \frac{3x + 12}{-12} = \frac{kx - 2k}{-12}$$

$$x = \frac{2k + 12}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2) \quad \begin{array}{|c|c|c|c|} \hline & 1 & -2x & x^2 \\ \hline 1 & | & | & | \\ \hline x & | & -2x^2 & x^3 \\ \hline \end{array}$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-

$$\frac{x+3}{5}$$

$$5. \frac{2x+3}{3} - \frac{3x+2}{5} \quad \frac{10x+15}{15} - \frac{9x+6}{15} = \frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{x}{12} = \frac{4}{3}$$

$$\frac{2x}{3} = \frac{48}{3} \quad 3 \overline{)48} \quad 16$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

$$\begin{array}{r} 270 \\ -150 \\ \hline 120 \\ -120 \\ \hline 0 \end{array} = 2 + 3$$

7. Solve for x and y

$$3x - 5y = -2$$

$$5(x+y=10)$$

$$5x + 5y = 50$$

$$3x - 5y = -2$$

$$8x = 48$$

$$x = 6$$

$$x = 6$$

$$y = 4$$

$$3(6) - 5y = -2 - 5y = -20$$

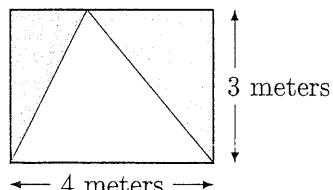
$$-18 - 5y = -2 - 5y = -2$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 200 \\ \times 3.5 \\ \hline 700 \\ 150 \\ \hline 250 \\ \hline 900 \end{array}$$

$$\$400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\frac{4 \cdot 3}{2} = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200} = \frac{x}{100}$$

$$60 \% \quad \boxed{}$$

boxes

Score

8 / 10

No calculators

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation $x(3-k) = -2k-12$

$$3x+kx = kx - 2k$$

$$3x - kx = -2k - 12$$

$$3(x+4) = k(x-2)$$

$$x = \frac{-2k-12}{3-k}$$

2. Multiply out and simplify. Check your answer. $1 - 2x + x^2 + x^3 + x^4$

$$x^3 - x^2 - x + 1$$

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - 3x + 1$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

~~10x+5~~
15 denominator and sim-
~~8x+6~~
plify.

$$\frac{x+21}{15}$$

$$5. \frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} = \frac{x}{12} \quad \frac{1}{4} = \frac{x}{16}$$

$$x=16$$

$$16 = 4x \quad x=4$$

$$4$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 = 50(3) + 60x$$

$$270 = 150 + 60x$$

$$120 = 60x$$

$$x=2 \quad 2+3=5$$

$$5$$

hours

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$5$$

7. Solve for x and y

$$x = 6$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$y = 10 - x$$

$$y = 4$$

$$3x - 5(10-x) = -2$$

$$3x - 50 + 5x = -2$$

$$8x - 50 = -2 \quad 8x = 48$$

$$8x - 50 = -2 \quad 8x = 48$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7(100) = 700$$

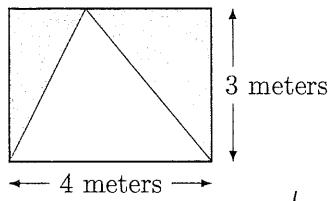
$$3.5(200) = 700$$

$$1(150) = 150$$

$$2.5(100) = 250$$

$$\$ 1100$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$12 - 6 = 6$$

$$6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200} = \frac{4}{10} = \frac{2}{5}$$

$$60 \%$$

%

Put your final answers in the

boxes

Ryan Dominguez
5336302

Score

6/10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$x = \frac{kx - 2k}{3} - 4$$

$$3(x + 4) = k(x - 2)$$

$$3t + 12 = kx - 2k$$

$$3x = kx - 2k - 12$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2) = 1 - 2x + x^2 + x - 2x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{3}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \times \frac{1}{4} = \frac{1}{3} = 4$$

$$4$$

5. Calculate

$$\frac{\frac{1}{3} - \frac{1}{4}}{20} = \frac{1}{16} = \frac{1}{0.0625}$$

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$\boxed{}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 \text{ mi} / 3 \text{ hr}$$

$$\begin{array}{rcl} 120 \text{ mi} & - & 150 \\ \hline 60 \text{ mph} & - & 2 \text{ hr} \end{array} \quad \begin{array}{l} 270 \\ - 150 \\ \hline 120 \\ \text{mi} + 10 \text{ hr} \\ 3 \text{ hr} + 2 \text{ hr} \end{array}$$

hours

$$\begin{array}{rcl} 6.5 & - & 3.5 \\ \hline 3 & - & 3 \end{array}$$

$$\begin{array}{rcl} 20 & - & 15 \\ \hline 5y & - & 3y \\ \hline 2y & = & -2 \\ y & = & -1 \end{array}$$

$$\begin{array}{rcl} 3(10-y) & - & 5y = -2 \\ 30 - 3y & - & 5y = -2 \\ -8y & = & 28 \end{array}$$

$$y = \frac{28}{-8} = 3\frac{1}{2}$$

7. Solve for x and y

$$x + 3.5 = 10$$

$$-3.5 - x = 6.5$$

$$x = 6.5$$

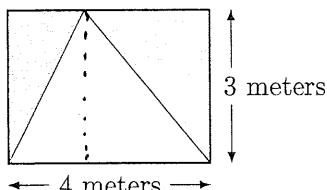
$$y = 3.5$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{rcl} -5700 & - & 700 + 700 \\ + 3.5(200) & - & + 700 \\ + 150 & - & + 150 \\ + 5150 & - & 2.5(100) + 250 \\ \hline 150 + 250 & = & 400 \end{array}$$

$$\begin{array}{rcl} \$ & 400 \\ & & \\ & & \\ & & \end{array}$$

9. What is the area of the shaded region?



$$\boxed{}$$

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{rcl} 1200000 & - & 800000 \\ \hline 400000 & & \end{array}$$

$$\begin{array}{rcl} 3 & - & 1 \\ 5 & - & 4 \\ \hline 1 & & \end{array}$$

$$\begin{array}{rcl} 100 & - & 60 \\ 100 & - & 60 \\ \hline 40 & & \end{array}$$

$$\begin{array}{rcl} 60 & & \% \\ & & \end{array}$$

$$\begin{array}{rcl} 10 & - & 8 \\ 10 & - & 8 \\ \hline 2 & & \end{array}$$

Dariyah Caldera Jr

Math 34A Winter 2021

Entrance Quiz

Perm #: 5720112

No calculators

$$(6 - \left(\frac{1}{2}\right)^{-1})$$

Put your final answers in the

| |
|--------|
| boxes. |
|--------|

$$\frac{9}{16} \times \frac{1}{12}$$

Score

$$\frac{7}{10}$$

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{array}{r} 12 \\ 16 \\ \times 3 \\ \hline 120 \\ 36 \\ \hline 132 \end{array}$$

$$1 - x - x^2 + x^3$$

1. Solve for x in the equation

$$3x+12 = kx-2k-11$$

$$3(x+4) = k(x-2)$$

$$\frac{3x+12}{3} = \frac{kx-2k-11}{k}$$

$$x = \frac{kx-2k-11}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2) = 1 - 2x + x^2$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3x+5} - \frac{3x+2}{5x+3}$$

$$\frac{x+21}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{3}{4} \cdot \frac{4}{3} \cdot \frac{12}{1} = \frac{12}{16}$$

$$\frac{3}{4} \quad \textcircled{4} \quad \frac{12}{16}$$

5. Calculate

$$\frac{20}{16}$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{1}{4} \text{ or } 1.25$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ -180 \\ \hline 90 \\ \times 2 \frac{2}{3} \\ \hline 120 \end{array}$$

$$5 \text{ hours}$$

7. Solve for x and y

$$\begin{array}{l} x=8 \\ y=4 \end{array}$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$x=6$$

$$18 - 20 = -2$$

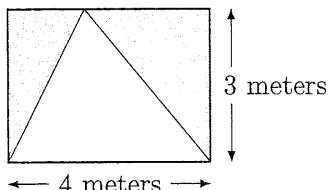
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 150$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$3 \cdot 7 = 12 \text{ m}^2$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000$$

$$80,000$$

$$\$120,000$$

$$\frac{60}{80} \times 100\% = 60\%$$

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

No calculators

Put your final answers in the

boxes

Score

8 / 10

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Sarah Rodriguez

Perm# 8446718

3/31/22

1. Solve for
- x
- in the equation ??

$$3x+12=14x-2$$

$$-12x \quad -12x$$

$$3x-12x+12=-2$$

$$3(x+4)=k(x-2)$$

$$3x-12x=-14$$

$$(3-k) \quad (3-k)$$

$$x = \frac{12+2k}{k-3}$$

$$x = -\frac{14}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

$$1-2x+x^2+x = \cancel{1-2x+x^2} + x^3$$

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1 \quad \checkmark$$

3. Put over a common

$$10x+15-9x-10 = x+9$$

denominator and sim-

$$\frac{10x+15}{15} - \frac{9x+10}{15}$$

$$2x+3 \quad 3x+2$$

$$\frac{2x+3}{3} \quad \frac{3x+2}{5}$$

$$x = \frac{x+9}{15}$$

$$\frac{x+9}{15} = \frac{x+3}{5}$$

5. Calculate

$$(16 - (\frac{1}{12})^{-1})^2$$

$$(16-12)^2$$

$$(4)^2 = 16$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2} = \frac{20}{16} = \frac{5}{4}$$

$$\frac{5}{4} \quad \checkmark$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \times 3 = 150 \text{ mi}$$

$$\begin{array}{r} 270 \\ -150 \\ \hline 120 \end{array} \quad \begin{array}{r} 120 \div 60 = 2 \\ \text{hrs} \\ 120 \text{ mi} \\ \text{left} \\ 3+2=5 \text{ hrs} \end{array}$$

$$5 \quad \text{hours} \quad \checkmark$$

7. Solve for
- x
- and
- y

$$3(10-y)-5y = -2$$

$$30-3y-5y = -2$$

$$30-8y = -2$$

$$\frac{-8y}{-8} = \frac{-2}{-8}$$

$$y = 0.25$$

$$30-8(0.25) = 22$$

$$30-2 = 28$$

$$28-25 = 3$$

$$x = 10 - 0.25 = 9.75$$

$$x = 0$$

$$y = 4$$

\checkmark

$$7/2 = 3.5$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

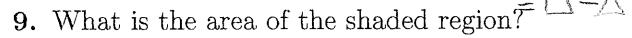
$$3.5(200) = 700$$

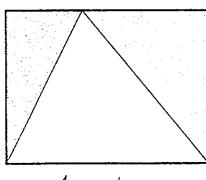
$$3.5 - 1 = 2.5$$

$$2.5(100) = 250$$

$$\$700 \text{ lost}$$

$$\begin{array}{r} 150 \\ 150 \\ +250 \\ \hline 400 \end{array}$$

9. What is the area of the shaded region?
- 



3 meters
4 meters

$$A_{\square} = 12 \text{ m}^2$$

$$6 \quad \text{square meters} \quad \checkmark$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200} = \frac{8}{20} = \frac{2}{5}$$

40% paid

$$60 \quad \checkmark \%$$

$$A_{\Delta} = \frac{1}{2}(4)(3) = \frac{1}{2}(12) = 6 \text{ m}^2$$

$$12 - 6 = 6$$

3190691

boxes

Score

10 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

1. Solve for x in the equation

$$\checkmark 3x + 12 = kx - 2k .$$

$$(3-k)x = -2k - 12 . \\ x = -$$

$$3(x+4) = k(x-2) .$$

$$x = \frac{-2k - 12}{3-k} .$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1 .$$

3. Put over a common denominator and sim-

$$\begin{array}{r} 10x+15 \\ \hline 15 - 2x+3 \end{array} \quad \begin{array}{r} 3x+2 \\ \hline 3 \end{array}$$

$$\frac{x+9}{15} .$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\cancel{16} \quad \frac{1}{4} \times \frac{4}{3} = \frac{1}{3}$$

$$4 .$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

✓

$$\begin{array}{r} 1 \\ \cancel{16} \quad \frac{20}{\cancel{16}} \\ 16 - 12 = 4 . \end{array}$$

$$\frac{5}{4} .$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ - 150 \\ \hline 120 . \end{array}$$

$$5 . \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x = 6$$

$$x + y = 10$$

$$y = 4$$

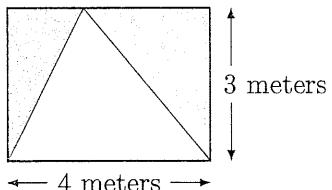
$$x - \frac{5}{3}y = -\frac{2}{3} .$$

$$\frac{8}{3}y = \frac{30+2}{3} = \frac{32}{3} . \quad y = 4 .$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 7.5 \times 200 = 1500 \\ 3.5 \times 200 . \quad + 150 \\ \hline 3.5 \times 150 . \quad + 850 \\ \hline 1100 . \end{array} \quad \$ 400 .$$

9. What is the area of the shaded region?



$$6 . \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{8}{20} .$$

$$60. \cancel{42} \% .$$

No calculators

boxes

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{15(x-2)}{3} - 4$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$x + 9$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

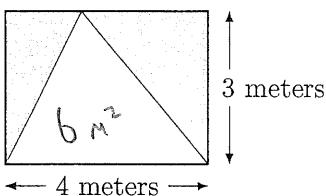
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

No calculators

boxes

provided on this page.

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If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x + 12 = kx - 2k \quad | -kx \quad | -12 \quad | \cancel{3} \\ 12 + 2k = kx - 3x \quad | \cancel{k} \\ 12 + 2k = x(k - 3) \quad | \cancel{k-3}$$

$$3(x + 4) = k(x - 2)$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is $\frac{25}{4}$ % of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot \frac{25}{4} \left(\frac{10}{3} \right) \frac{12}{1} \rightarrow \frac{120}{3} \\ \frac{40}{3} \\ 3 \overline{) 120 }$$

$$40$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$20$$

$$16$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\text{hours}$$

7. Solve for x and y

$$3(10-y) - 5y = 2 \\ 30 - 3y - 5y = 2 \\ 30 - 8y = 2 \\ 18y = 28 \\ y = 4$$

$$x + y = 10 \\ x + 4 = 10 \\ x = 6$$

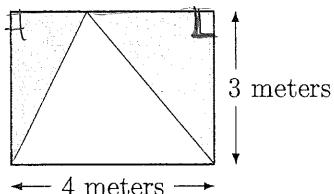
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200000 \\ - 80000 \\ \hline 120000 \end{array}$$

$$\frac{120000}{200000} = 0.6$$

$$60\%$$

$$\%$$

$$\frac{12}{20} = 0.6$$

No calculators

Score

10 / 10

boxes

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$(k-3)x = 2k + 12$$

$$x = \frac{2(k+b)}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\cancel{1} \cancel{(2)} \cancel{+} \cancel{1} \cancel{-} \cancel{2} \cancel{x} \cancel{+} \cancel{1} \cancel{x^2}$$

$$x^3 - x^2 - x + 1$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+15-9x-6}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\cancel{\frac{1}{4}} \times \cancel{\frac{4}{3}} \times 12 = 4$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^2\right)^2} = \frac{1}{\frac{1}{2}}$$

$$\frac{20}{16} = \frac{5}{4}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\text{Car: } 50 \times 3 = 150 \text{ m.}$$

$$\text{rest m: } 120$$

$$2. \quad 2+2$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$y = 10 - x$$

$$3x - 5(10 - x) = -2$$

$$8x = 48$$

$$x = 6, \quad y = 4$$

$$x = 6$$

$$y = 4$$

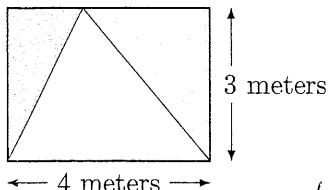
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7 \times 100 = 700$$

$$\frac{3.5 \times 200 + 150 + 2.5 \times 100}{700} = \frac{150}{150} = 1$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$12 - 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{3.2 \times 100000}{5.2 \times 100000} = 60$$

$$60 \%$$

Put your final answers in the

boxes

Score

8 / 10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Zabdi Guerrero
0207203

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{kx - 2k - 12}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x-9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

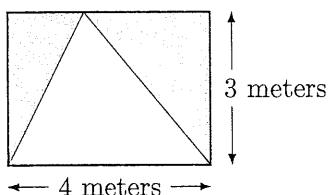
$$x = 10$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$400$$

9. What is the area of the shaded region?



$$10 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Put your final answers in the

boxes

Score

2 / 10

No calculators

provided on this page.

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If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x =$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x = kx - 2k + 12$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$\frac{x+2}{15}$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

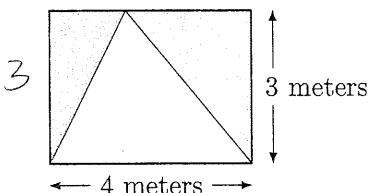
$x = 6$

$y = 4$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 1050

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

Put your final answers in the

| |
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| boxes |
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Score

| | | |
|----|---|----|
| 10 | / | 10 |
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No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -2k - 12$$

$$x(3-k) = -2k - 12$$

$$x = \frac{-2k - 12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+15}{15} - \frac{9x+12}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$.25 \left(\frac{4}{3}\right) = \frac{1}{3}(12)$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{(16-12)^2}$$

$$\frac{20}{16}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50(3) + 60x = 270$$

$$60x = 120$$

$$x = 2$$

$$5$$

hours

$$3+2=5$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$3(10-y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$30 - 8y = -2$$

$$32 = 8y$$

$$y = 4$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 \times 200 = 700$$

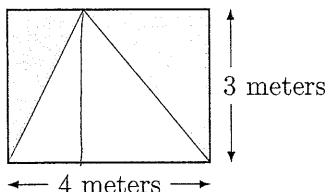
$$1 \times 150 = 150$$

$$2.5 \times 100 = 250$$

$$1100 - 700 = 400$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$12 - 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000}$$

$$60 \%$$

Put your final answers in the

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Score

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| 2 | / | 10 |
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No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

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If you score 8–10, congratulations! You are ready for Math 34A.

Jaeger Maharg

59 62 03 0

- X 1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{kx - 2k - 12}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - 2x^2 + x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ -150 \\ \hline 120 \end{array} \cdot 3 \text{ hr}$$

5 hours

- X 7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

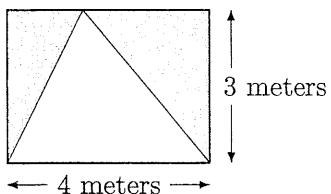
$$x = 1$$

$$y = -1$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

- X 9. What is the area of the shaded region?



$$12 \text{ m}^2 \text{ square meters}$$

- X 10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

20 %

Pablo Run

(559) 369-6227

Math 34A Winter 2021

Entrance Quiz.

Put your final answers in the

boxes

Score

5 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x = kx - 2k - 12$$

$x = \frac{18}{5}$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$1 - x - x^2 + x^3$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$\frac{x+9}{15}$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$\frac{20}{\left(\frac{11}{12}\right)^{-2}}$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

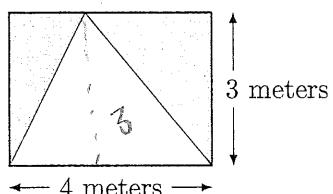
$x = 6$

$y = 4$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

Put your final answers in the

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Score

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No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

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If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$x = k(x-2) - 4$$

$$\begin{aligned} x &= \\ 3(x+4) &= \\ (x-2) &= \\ (x-2)(3x+12) &= \\ 3x^2 - 6x + 12x - 24 &= \end{aligned}$$

| |
|-------|
| $x =$ |
|-------|

2. Multiply out and simplify. Check your answer.

$$x(1+x)(1-2x+x^2) = x - 2x^2 + x^3$$

$$x^4 - x^3 - 2x^2 + x^3 = x^4 - 2x^2$$

3. Put over a common

✓ denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5} = \frac{10x+15 - 9x-6}{15} = \frac{x+9}{15}$$

| |
|------------------|
| $\frac{x+9}{15}$ |
|------------------|

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\frac{4}{3} \text{ of } 12 \text{ is } 16$$

$$\frac{1}{4} \text{ of } 16 \text{ is } 4$$

| |
|---|
| 4 |
|---|

5. Calculate

$$\left(\frac{4}{12} - \frac{3}{12}\right) \times \frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$16 - \left(-\frac{1}{12}\right)$$

$$16 \frac{1}{12}$$

| |
|--|
| |
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6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles.

✓ How many hours did the entire journey take?

$$3 \cdot 50 = 150 \text{ mi}$$

$$270 - 150 = 120$$

$$\frac{120}{60} = 2$$

| |
|---|
| 5 |
|---|

hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$3(10 - y) - 5y = -2$$

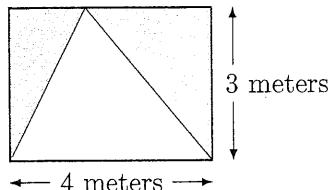
$$30 - 3y - 5y = -2$$

$$30 - 8y = -2$$

$$x = 6$$

$$y = 4$$

8. What is the area of the shaded region?



| |
|---------------|
| square meters |
|---------------|

- ✓ 700
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 \cdot 200 = \$700$$

$$\frac{1}{2} \cdot \$200 = \$100$$

$$2.5 \cdot 100 = \$250$$

$$\$400$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{l} \frac{80}{200} \text{ DWE} \\ \frac{12}{20} \text{ KEEP} \\ \frac{6}{10} \end{array}$$

| | |
|----|---|
| 60 | % |
|----|---|

Put your final answers in the

boxes

Score

6 / 10

No calculators

provided on this page.

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If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Sydney Reardon

PERMIT: 6314850

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$x = 18$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+3}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

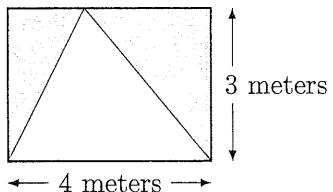
$x = 6$

$y = 4$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 400

9. What is the area of the shaded region?



60 square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

boxes

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

Joshua Shi

If you score under 4 on this test, you should consider dropping the class.

5081196

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$kx - 3x = 12 + 2k$$

$$x = \frac{12 + 2k}{k - 3}$$

$$3(x + 4) = k(x - 2)$$

$$3x + 12 = kx - 2k$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{(10x+15)-3(3x+2)}{(10x+15)-9x-6} =$$

$$5(2x+3)(3x+2)^3$$

B1

B1

$$x + 9$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot 12 = \frac{48}{3} = 16$$

$$0.25 \cdot 16 = 4$$

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$= 12$$

$$(16-12)^2$$

$$= 16$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 + 60x = 270$$

$$x = 2$$

5

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$y = 10 - x$$

$$3x - 5(10 - x) = -2$$

$$3x - 50 + 5x = -2$$

$$x = 6$$

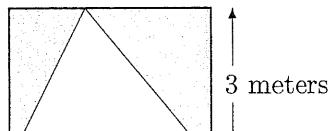
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} -700 \\ +700 \\ +150 \\ +250 \\ \hline = \$400 \end{array}$$

\$ 400

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\left(\frac{1}{2} \times 3\right) - \left(\frac{1}{2} \times 3\right) = \frac{4 \times 3}{2} = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\text{keep} = \frac{120,000}{200,000} =$$

$$\frac{12}{20} = \frac{6}{10}$$

$$60 \%$$

Put your final answers in the

boxes

Score

7 / 10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Samantha Hernandez

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{kx - 2k - 4}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

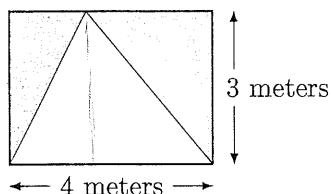
$$x =$$

$$y =$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Put your final answers in the

boxes

Score

4 / 10

No calculators

provided on this page.

Cynthia Salgado

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If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$\frac{x+21}{15}$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

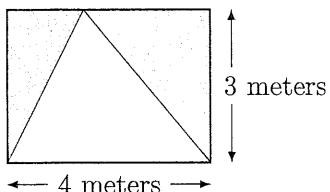
$x = 6$

$y = 4$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$ 300

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

No calculators

boxes

provided on this page.

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If you score 8–10, congratulations! You are ready for Math 34A.

$$\begin{array}{r} 1 - 2x + x^2 \\ \times 1 - 2x \quad x^2 \\ \hline x^3 - 2x^2 \quad x^3 \end{array}$$

1. Solve for x in the equation

$$\frac{2x+36}{x} = \frac{8x}{x}$$

$$2x+36 = 8x$$

$$3x+12 = 3(8-2)$$

$$3(x+4) = k(x-2)$$

$$3x+12 = kx - 2k$$

$$+24 \qquad +24$$

$$\begin{aligned} k &= \frac{39}{8} & 3x &= -90 \\ 3x+12 &= -78 & x &= -30 \end{aligned}$$

$$x = -30$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{(5)(2x+3)}{(5x^3)} - \frac{(3x+2)(3)}{(5x^3)}$$

$$\frac{10x+15 - (9x+6)}{25} = \frac{10x+15 - 9x - 6}{25}$$

$$\frac{x+9}{25}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\begin{aligned} \frac{4}{3} \cdot \frac{1}{3} &= 16 & 25\% \text{ of } 16 \\ \frac{4}{3} \cdot 12 &= \frac{16}{4} \end{aligned}$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 \text{ miles}$$

$$\begin{aligned} 3 \text{ hours} &= 150 \text{ miles} \\ 2 \text{ hours} &= 120 \text{ miles} \end{aligned}$$

$$5$$

hours

7. Solve for x and y

$$x = 5$$

$$3x - 5y = -2$$

$$\begin{aligned} 5+y &= 10 & x+y &= 10 \\ -5 &-5 & -x &-x \\ y &= 5 & y &= 10-x \end{aligned}$$

$$3x - 5(10-x) = -2$$

$$\begin{aligned} 3x - 50 + 5x &= -2 & 8x &= 48 \\ 8x - 50 &= -2 & x &= 6 \end{aligned}$$

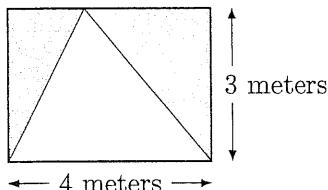
$$y = 5$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} &\cancel{-\$700} \\ &3 \cdot \cancel{8} \cdot \$200 = \$700 \\ &1 \cdot \$150 = \$150 \rightarrow \$400 \\ &2 \cdot 5 \cdot \$100 = \$250 \end{aligned}$$

$$\$ 400$$

9. What is the area of the shaded region?



$$12 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} \frac{120}{200} \\ 50\% \end{aligned}$$

$$60$$

%

Put your final answers in the

boxes

Score

7.6 / 10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{aligned} & (1+2x)(x^2) \\ & + (x+2x^2)(x^3) \\ & + (1+2x+x^2-2x^2+x^2+x^3) \end{aligned}$$

1. Solve for x in the equation

$$x+4 = \frac{k}{3}(x-2)^{-4}$$

$$x = \frac{k}{3}(x-2)^{-4}$$

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$3x = kx-2k$$

$$x = \frac{kx-2k-12}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)(1-2x+x^2+x^3)$$

$$(1-x-x^2+x^3)$$

3. Put over a common

denominator and sim-

$$\underline{16x+15} - (9x+6)$$

$$\left(\frac{2x+3}{3} \right) \left(\frac{3x+2}{5} \right)$$

$$\frac{(x-9)}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{25}{100} \quad \frac{4}{3} \quad 12$$

4

$$\cancel{25} \quad 4 \quad \boxed{16} \quad 25\%$$

5. Calculate

$$\left(16 - \left(\frac{1}{3} - \frac{1}{4} \right)^{-1} \right)^2$$

$$\frac{5}{4}$$

$$\begin{aligned} & \left(\frac{1}{12} \right)^{-1} \quad \frac{1}{12} = 12 \\ & 16-12 \\ & \frac{20}{16} = \frac{5}{4} \end{aligned}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

50 mph 3hr

60 mph

270 mi 150

$$5 \text{ hours}$$

$$\frac{270}{150} = \boxed{120} \quad 2$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$y = 10 - x$$

$$x = 12$$

$$y = -2$$

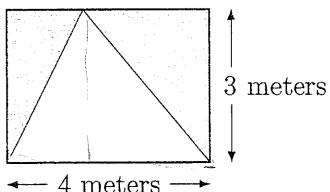
$$3x - 5(10-x) = -2$$

$$4x = \frac{48}{4} = 12$$

8. An entrepreneur bought $\frac{7}{3.5}$ tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

| | | |
|----------|-----------|--------|
| 3.5 tons | \$200/ton | -700 |
| 1 ton | \$150/ton | +150 |
| 2.5 tons | \$100/ton | +250 |
| | | \$ 350 |

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

12 - 6

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{60}{200} = \frac{60}{100}$$

$$60 \dots \% \quad \boxed{60}$$

Put your final answers in the

boxes

Score

6 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x + 12 = kx - kz$$

$$3(x + 4) = k(x - 2)$$

$$x = \frac{(-kz + kz)}{(3 - k)}$$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x + 3}{3} - \frac{3x + 2}{5}$$

$$x \geq 1$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{1}{3} \cdot \frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{17} \cdot \frac{20}{289}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

?

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

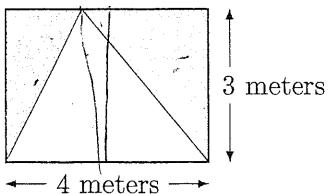
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$760

3.5

\$ 400

9. What is the area of the shaded region?



square meters

12

?

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200 \quad \frac{80}{200}$$

$$\frac{40}{100}$$

40%

60 %

boxes

5 / 10

No calculators

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If you score 8-10, congratulations! You are ready for Math 34A.

Katherine
Schares
5798285

1. Solve for x in the equation

$$3x + 12 = 4x - 24$$

$$3x - 4x + 24 = -12$$

$$3(x + 4) = k(x - 2)$$

$$x =$$

2. Multiply out and simplify. Check your answer.

$$\begin{array}{r} 1 \\ \times 1 \\ \hline x \end{array} \quad \begin{array}{r} -2x \\ \times x^2 \\ \hline -2x^2 \\ x^3 \end{array} \quad (1 + x)(1 - 2x + x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{x+7}{15}$$

$$\frac{2x+3}{15} - \frac{3x+2}{15} = \frac{2x+3 - 3x-2}{15} = \frac{-x+1}{15}$$

5. Calculate

$$\frac{4}{12} - \frac{3}{12} = \frac{1}{12}$$

$$\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{270}{150}$$

120 miles

$$3 + 2$$

5 hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$y = 10 - x$$

$$3x - 5(10 - x) = -2$$

$$3x - 50 - 5x = -2$$

$$-2x = 48 \quad x = -24$$

$$x = -24$$

$$y = 34$$

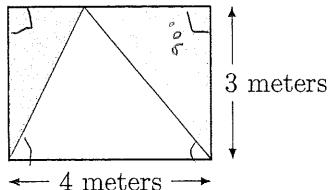
$$\begin{aligned} &3x - 5(10 - x) = -2 \\ &3x - 50 - 5x = -2 \\ &-2x = 48 \quad x = -24 \end{aligned}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{rcl} 3.5 & \times 200 & = 700 \\ 1 & \times 150 & = 150 \\ 2.5 & \times 100 & = 300 \end{array}$$

$$\$ 500$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$200,000 - 80,000 = 120,000$$

$$\frac{120,000}{200,000} = \frac{3}{5}$$

60 %

Put your final answers in the

Score

1 / 10

No calculators

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If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$x =$

$$3x + 12 = kx - 2k$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 + 2x + x^2 + 1x - 2x^2 - x^3$$

3. Put over a common

denominator and sim-
plify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \times 100\%$$

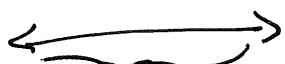
5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

50 mph 120

5 hours



7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

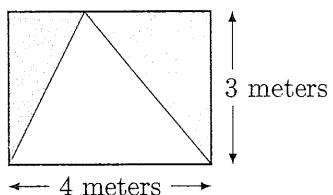
$x =$

$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%

boxes

6 / 10

No calculators

provided on this page.

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If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

2. Multiply out and simplify. Check your answer.

~~$$(1+x)(1-2x+x^2)$$~~

$$1 + 2x + x^2 \cancel{+ x} - x - 2x^2 + x^3$$

$$1 + 3x - x^2 + x^3$$

X

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

✓

$$\frac{10x+15}{15} - \frac{9x+6}{15} = \frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\frac{1}{4} \cdot 16 = 4$$

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{4}{12} - \frac{3}{12}$$

X

$$-\frac{1}{20}$$

$$(16 \div 2)^2$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ - 150 \\ \hline 120 \end{array}$$

5 hours

$$2+3=5$$

✓

7. Solve for
- x
- and
- y

$$\begin{array}{l} -3x -3x \\ 5(x = \frac{3}{5}x + \frac{3}{5}) + 3y = -2 \\ 5x = 3x + 3 \\ 2x = 3 \\ x = \frac{3}{2} \end{array}$$

$$\begin{array}{l} -3x -3x \\ x + y = 10 \\ 3x + 3y = 30 \\ -3y = -3x - 2 \\ -3y = -3(\frac{3}{2}) - 2 \\ -3y = -\frac{9}{2} - 2 \\ -3y = -\frac{13}{2} \\ y = \frac{13}{6} \end{array}$$

$$x = \cancel{\text{ }}$$

$$y = \frac{3}{5}x + \frac{2}{5}$$

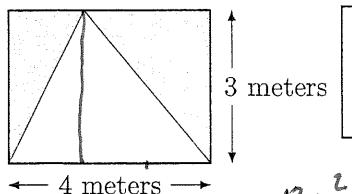
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 7 \times 100 = 700 \\ 3.5 \text{ ton} \times 200 = 700 \\ 1 \times 150 = 150 \\ 2.5 \times 100 = 250 \end{array}$$

\$ 400

✓

9. What is the area of the shaded region?



square meters

12 m²

X

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200 \\ - 80 \\ \hline 120 \end{array}$$

$$\frac{120}{200}$$

$$\frac{6}{10}$$

$$\frac{3}{5}$$

✓

Put your final answers in the

boxes

Score

2 / 10

No calculators

provided on this page.

Avani Yip

6202618

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\cancel{3x} - \cancel{kx} = -2k - 12$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k - 12$$

$$-kx \cancel{-12} \quad -kx$$

$$x = \frac{-2k - 12}{3}$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{2x+3}{5} - \frac{3x+2}{3}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$25\%$$

5. Calculate

$$\sqrt{20} \\ (16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2$$

$$\sqrt{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ 110 \\ 160 \\ 60 \\ \hline 110 \end{array} \quad \begin{array}{r} 270 \\ 150 \\ 120 \\ 60 \\ \hline 60 \end{array} = 20$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

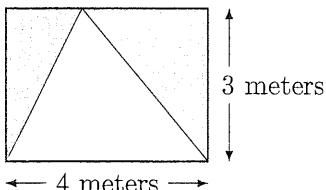
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 7t / \$100 \\ 3.5 / \$200 \\ 1 / \$150 \\ \hline 1.5 / \$100 \end{array} \quad \begin{array}{r} \$700 \\ \$300 \\ \$150 \\ \$100 \\ \hline \$850 \end{array}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200 \\ - 80 \\ \hline 120 \end{array}$$

$$80 \%$$

boxes

10 / 10

No calculators

provided on this page.

10/8

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Chanh Yoon

445 2777

1. Solve for x in the equation

$$3x + 12 = kx - 2k$$

$$(3-k)x = -2k - 12$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - (3-k)x = \frac{-2k-12}{(3-k)}$$

$$x = \frac{(-2k-12)}{(3-k)}$$

2. Multiply out and simplify. Check your answer.

$$\cancel{x} - 2\cancel{x} + \cancel{x}^2 + \cancel{x}^3$$

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify. $10x+15$ $9x+6$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2} - \frac{4}{12} - \frac{3}{12}$$

$$\frac{1}{12}$$

$$4 \quad 16$$

5

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 \quad 120$$

$$5$$

hours

7. Solve for x and y

$$18 - 26$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

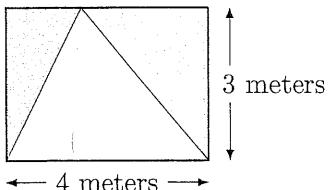
$$7 \quad 3.5 \quad 150$$

$$3.5 \quad 0$$

$$2.5 \quad 5$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

6

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Put your final answers in the

boxes

Score

8 / 10

No calculators

provided on this page.

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If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$x(3-k) = 12 - 2k$$

$$x = \frac{12-2k}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$3x^2 + (1+x)(1-2x+x^2)$$

$$3x^2 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+5}{15} - \frac{9x-6}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+1}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$(16 - (3 - 4))^2 \cdot \frac{20}{(16 - (\frac{1}{3} - \frac{1}{4}))^2} \cdot (16 - (\frac{1}{3} - \frac{1}{4}))$$

$$\frac{(6+1)^2}{(17)^2} = \frac{25}{289}$$

$$\frac{25}{289}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$20 + 50 \\ 2$$

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x - 50 + 5x = -2$$

$$8x = 48$$

$$x = 6$$

$$x = 6$$

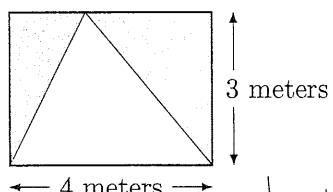
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$(3.5 \times 200) - 350 \\ 350 + 50 = 400$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$6 - 2$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

| |
|-------|
| boxes |
|-------|

No calculators

provided on this page.

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If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$\cancel{3x+12} = \cancel{kx}$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$\frac{3x+12+2k}{k} = \frac{kx-2k}{k}$$

$$x = 3x + 12 + k$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1-2x+x^2+x-2x^2+x^3$$

$$1-3x+x^2+x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{5(2x+3) - 3(3x+2)}{15}$$

$$10x+15 - 9x-6$$

$$x+9 \quad \frac{x+9}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$\checkmark \quad \frac{1}{4} \cdot \frac{4}{3} \cdot \frac{12}{1} = \frac{48}{12} = \frac{8}{2} = 4$$

5. Calculate

$$(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2$$

$$\frac{5}{4}$$

$$(16-12)^2 = 4^2$$

$$\frac{20}{16}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\checkmark \quad \begin{array}{r} 270 \\ - 150 \\ \hline 120 \end{array}$$

$$5 \text{ hours}$$

7. Solve for
- x
- and
- y

$$-2+5y = 3x - 5y = -2$$

$$\frac{-2+5y}{3} = \frac{3x-5y}{3} = x+y = 10$$

$$3x - 5y = -2$$

$$+ 5y \quad 3x = -2 + 5y$$

$$0 = -2 + 5y - 3x$$

$$x = -7$$

$$y = 8$$

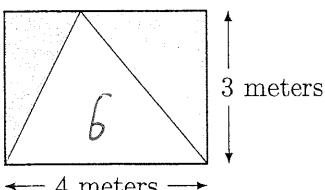
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\checkmark \quad \begin{array}{r} 200 \\ 3.5 \\ \hline 1000 \\ - 4.5 \\ \hline 600 \\ 600 \\ \hline 1200 \\ - 850 \\ \hline 350 \end{array}$$

$$\$ 400$$

$$\begin{array}{r} 100 \\ 700 \\ \hline 400 \end{array}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\checkmark \quad 4 \cdot 3 = 12/2 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80}{200}$$

$$60\%$$

$$\frac{8 \times 5}{20 \times 5} = \frac{40}{100}$$

boxes

6 / 10

No calculators

provided on this page.

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If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12 + 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3 \cdot 5} - \frac{3x+2}{5 \times 3}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot \frac{12}{4}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x + y = 10$$

$$-y -y$$

$$x = 10 - y$$

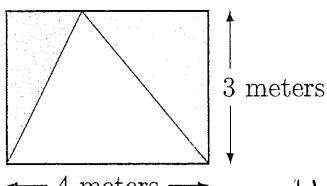
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$4 \times 3 = 12$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200,000 - 80,000}{200,000}$$

$$60\%$$

%

$$\frac{120,000}{200,000} = 0.6 \times 100 = 60\%$$

No calculators

Put your final answers in the

gordon le
boxes

4644.35

Score

8 / 10

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{10x+15}{15} - \frac{9x+6}{15} = \frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

16

4

5. Calculate

$$\left(16 - \left(\frac{1}{8} - \frac{1}{4}\right)^{-1}\right)^2$$

$$\frac{20}{81}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ - 150 \\ \hline 120 \\ \begin{array}{l} \quad \quad \quad 60 \\ \quad \quad \quad 2 \\ \hline \end{array} \end{array}$$

$$\begin{array}{r} 5 \\ \text{hours} \end{array}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

$$\begin{aligned} y &= 10 - x \\ 3x - 5(10 - x) &= -2 \\ 3x - 50 + 5x &= -2 \\ 8x &= 48 \\ x &= 6 \end{aligned}$$

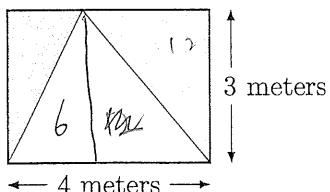
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

7 tons \$100/t

3.5 tons

\$ 400

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60

$$\begin{array}{r} 60 \\ \% \end{array}$$

boxes

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Avital Schwarz

5956099

1. Solve for x in the equation

7

$$3(x+4) = k(x-2)$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

7

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

7

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

7

$$4$$

5. Calculate

7

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

7

$$5$$

hours

7. Solve for x and y

7

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

7

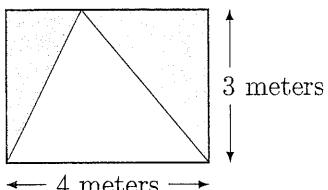
I read this
question wrong
lol

$$\$525$$

$$\$400$$

9. What is the area of the shaded region?

7



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

7

$$60 \%$$

No calculators

Score

7

/ 10

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{array}{r} 1 - 2x \quad x^2 \\ 1 \quad 1 - 2x \quad x^2 \\ \times \quad 1x \quad 1 - 2x^2 \quad x^3 \end{array}$$

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = 0$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common

denominator and sim-

$$\frac{10x+15}{15} \cdot \frac{1x+6}{15} = \frac{x+1}{15} \cdot 3$$

$$\frac{1}{3}x + 3$$

$$\frac{10x+15}{15} \left(\frac{2x+3}{3} \right) \left(\frac{3x+2}{5} \right) \rightarrow \frac{9x+6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\begin{aligned} \frac{1}{3} \text{ of } 12 &= 4 \\ 25\% \text{ of } 4 &= 1 \\ 25\% \text{ of } 16 &= 4 \end{aligned}$$

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \text{ mph} \cdot 3 \text{ h} = 150 \text{ m}$$

$$\begin{array}{r} 270 \\ -150 \\ \hline 120 \text{ m} \end{array}$$

$$120 \text{ mph} : 60 \text{ mph} = 2 \text{ h}$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

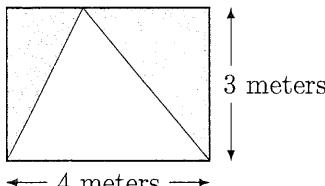
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} 7 \text{ tons} \times \$100 &= \$700 \\ 3.5 \times \$200 &= \$700 \\ 1 \times \$150 &= \$150 \\ 2.5 \times \$100 &= \$250 \end{aligned}$$

$$\begin{array}{r} \$400 \\ \$700 - \$700 - \$150 - \$250 = \$400 \end{array}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\begin{aligned} A &= \frac{b \cdot h}{2} \\ \frac{4 \cdot 3}{2} &= \frac{12}{2} = 6 \end{aligned}$$

$$\begin{aligned} 3 \cdot 4 &= 12 \\ -6 & \cancel{6} \end{aligned}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} \$200,000 - \$80,000 &= \$120,000 \\ \$120,000 &\div \$200,000 = 0.6 \\ 0.6 &\times 100\% = 60\% \end{aligned}$$

$$60\%$$

$$\begin{aligned} \$100,000 &\div \$200,000 = 0.5 \\ 0.5 &\times 100\% = 50\% \end{aligned}$$

Put your final answers in the

Score

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

*Leslie Calderon
65 square*

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - 3x$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

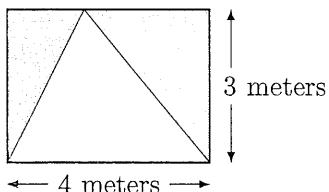
$$3x - 5y = -2$$

$$x + y = 10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 350$$

9. What is the area of the shaded region?



10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$30 \%$$

Put your final answers in the

| |
|-------|
| boxes |
|-------|

Score

| | | |
|---|---|----|
| 4 | / | 10 |
|---|---|----|

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{kx - 2k - 12}{3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+3}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$.25 \times 16$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{289}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

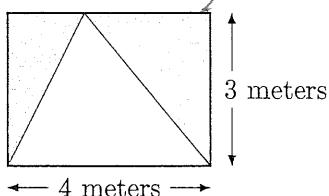
$$x = 10$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$$$

9. What is the area of the shaded region?



$$\text{square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$70 \% \quad \text{70 percent}$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

A Solve for x in the equation

$$\begin{aligned} 3x+12 &= kx-2k \\ 2k+12 &= kx-2k \\ 2k+12 &= x(k-2) \\ 3(x+4) &= k(x-2) \\ 3x+12 &= kx-2k \\ 3x-2k &= -2k-12 \\ 3(x-k) &= -2k-12 \end{aligned}$$

$$x = \frac{2k+12}{3-k}$$

A Multiply out and simplify. Check your answer.

$$\begin{aligned} 1-2x+x^2 &+ x-2x^2+3x^3 \\ (1+x)(1-2x+x^2) & \\ 1-2x+x^2+x-2x^2+3x^3 & \\ x^3-x^2-x+1 & \end{aligned}$$

3. Put over a common

denominator and sim-

$$\text{plify. } \frac{10x+15}{15} + \frac{9x+6}{15} = \frac{19x+21}{15}$$

$$\begin{array}{c} 3(2x+3) \\ \hline 3 \\ \hline 3x+2 \end{array}$$

$$\frac{19x+21}{15}$$

A What is 25% of $\frac{4}{3}$ of 12?

$$12 \cdot \frac{4}{3} = \frac{48}{3} = 16 \cdot \frac{1}{4} = 4$$

4

A Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$16 - \frac{1}{12} = \frac{144}{12}$$

$$\frac{144}{12}$$

$$20 \cdot \frac{1}{144} = \frac{5}{36}$$

$$\frac{5}{36}$$

A A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{aligned} &50 \cdot 3 = 150 \text{ mi} \\ &270 - 150 = 120 \text{ mi} \\ &60 \cdot t = 120 \\ &t = 2 \quad 2+3=5 \end{aligned}$$

$$\begin{array}{c} 150 \\ 120 \\ \hline 5 \end{array}$$

hours

A Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3(10-y) - 5y = -2 \quad 30 - 3y - 5y = -2$$

$$30 - 8y = -2 \quad 30 - 8y = -2$$

$$8y = 32 \quad y = 4$$

$$x = 6$$

$$y = 4$$

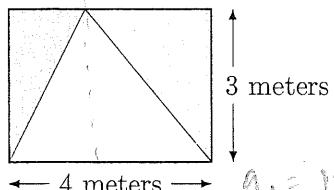
$$0.05 = \$100$$

A An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} 3.5 \text{ tons} \cdot 200 &= \$700 \text{ prof} \\ 1.5 \text{ tons} \cdot 100 &= \$150 \\ 2.5 \text{ tons} \cdot 100 &= \$250 \\ 200 + 150 + 250 &= 600 \end{aligned}$$

$$\$400.00$$

A What is the area of the shaded region?



$$6 \text{ square meters}$$

A If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} \frac{80,000}{200,000} &= \frac{20}{200} = \frac{1}{10} \\ &= 0.1 \end{aligned}$$

$$60$$

%

40%. Tax

Georgia D'Aloisio 9984865

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

boxes

Score

3 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{3x+14}{k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x-9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

X

$$\frac{.25}{12} + \frac{1.33}{12}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

✓

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x = -24$$

$$x + y = 10$$

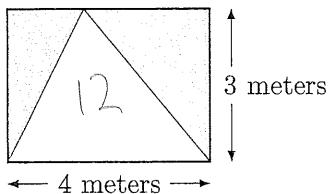
$$y = 34$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

X

$$\$ 300$$

9. What is the area of the shaded region?



$$\text{square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\%$$

Put your final answers in the

boxes

Score

7 / 10

No calculators

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

Wendy Ayarici
5747019

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$x = \cancel{kx - 2k - 12} \overline{-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$\frac{x+4}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. $\frac{2x+3}{3} - \frac{3x+2}{5}$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$1.25$$

7. Solve for x and y

$3x - 5y = -2$

$x + y = 10$

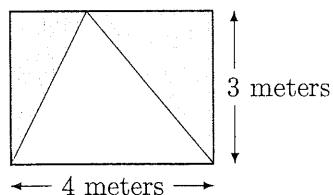
$x = \frac{-2 + 5y}{3}$

$y = \frac{-2 - 3x}{-5}$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\%$$

Put your final answers in the

boxes

Larine OSMAN

471 8828

Score

8 / 10

No calculators

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Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12+2k}{-3+k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$320$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$2$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

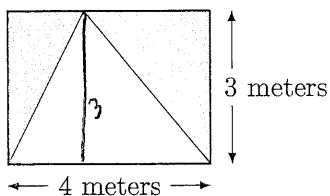
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 460$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200 and pay \$80 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Put your final answers in the

boxes

Score

6 / 10

No calculators

provided on this page.

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If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$\begin{array}{r} 3x + 12 = -4x + 12 \\ +6x \quad -12 \\ \hline 9x = \end{array}$$

1. Solve for
- x
- in the equation

$$3x + 7 = kx - 2 \quad 3(x+4) = -6(x-2)$$

$$3(x+4) = k(x-2)$$

$x =$

$$3(4) = k(-2) \quad 12 = -2k$$

3. Put over a common

denominator and sim-

$$\frac{2x+3}{15} - \frac{3x+2}{15}$$

$$\frac{-x+5}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5} \cdot \frac{1}{3} \quad \frac{-x+5}{15}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2} \quad 16+1=17^2$$

$$\frac{20}{17^2}$$

2. Multiply out and simplify. Check your answer.

$$\begin{array}{r} 1-2x+x^2+x-2x^2+x^3 \\ \hline (1+x)(1-2x+x^2) \\ x^3-x^2-x+1 \end{array}$$

$$x^3 - x^2 - x + 1$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

$$4 \cdot 4 = 16$$

$$\frac{1}{4} \cdot \frac{16}{4} = 4$$

4

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50(3) = 150 \text{ miles}$$

$$\frac{270}{150} \quad \frac{120}{60} = 2$$

$$5 \text{ hours}$$

7. Solve for
- x
- and
- y

$$x = 6$$

$$3x - 5y = -2$$

$$\begin{array}{r} x+y=10 \\ -x \quad -x \\ \hline y = 4 \end{array}$$

$$y = 10 - x \quad 3x - 5(10 - x) = -2 \quad 8x = 48 \quad x = 6$$

$$3x - 5(10 - x) = -2 \quad \begin{array}{r} 6+y=10 \\ -6 \quad -6 \\ y=4 \end{array}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$7(100) = 700$$

$$3.5 \text{ tons}(200) = 700$$

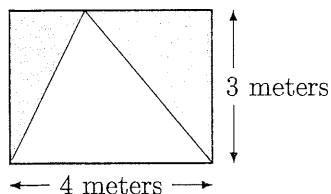
$$1 \text{ ton}(150) = 150$$

$$7-4.5 = 2.5(100) = 250$$

\$ 400

$$\begin{array}{r} 150 \\ 250 \\ \hline 400 \end{array}$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{80,000}{200,000}$$

$$\frac{80}{200} \rightarrow \frac{8}{20} \rightarrow \frac{4}{10} = 40\%$$

60 %

boxes

No calculators

Score

5627625

6 / 10

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3x - x = \frac{-2k-12}{k}$$

$$3(x+4) = k(x-2)$$

$$3x+12 = kx-2k$$

$$\cancel{3x} - \cancel{kx} = \frac{-2k-12}{\cancel{k}}$$

$$x = \frac{-2k-12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$x - 9$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{4} - \left(\frac{1}{3} - \frac{1}{4} \right)^{-1}$$

$$x =$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{220}{150} = \frac{120}{120}$$

$$3 + 2 \text{ hours}$$

- ✓ 7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

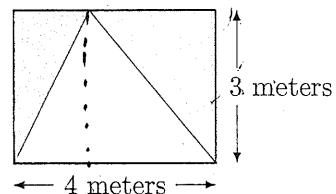
$$y =$$

$$x = 10 - y$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 400$$

9. What is the area of the shaded region?



$$12 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

Alyssa Carlson

Perm: 84607219

Math 34A Winter 2021

Entrance Quiz

Put your final answers in the

boxes

Score

10 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

✓ 1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -2k - 12$$

$$x = \frac{-2(k+6)}{3-k}$$

$$x(3-k) = -2k - 12$$

✓ 2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1+x - 2x - 2x^2 + x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

✓ 3. Put over a common

denominator and sim-

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

$$\frac{x+9}{15}$$

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

✓ 5. Calculate

$$\frac{20}{\left(16 - \left(\frac{3}{2} - \frac{3}{12}\right)^{-1}\right)^2}$$

$$\frac{20}{14}$$

$$\frac{5}{4}$$

✓ 6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\frac{270}{150}$$

2

$$5 \text{ hours}$$

3

✓ 7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 6$$

$$y = 4$$

$$3x - 5(10-x) = -2$$

$$3x - 50 + 5x = -2$$

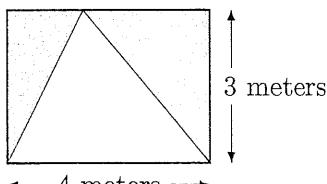
$$\frac{8x}{8} = \frac{48}{8}$$

✓ 8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} \frac{7}{2} \times 200 &= \$700 \\ &+ 150 \\ 25 \times 100 &= \$250 \\ &\hline \$400 \end{aligned}$$

$$\begin{array}{r} 1100 \\ 700 \\ \hline 400 \end{array}$$

✓ 9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\frac{1}{2} \cdot 4 \cdot 3 = 6 \text{ m}^2$$

$$12 - 6 = 6$$

✓ 10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120,000}{200,000}$$

$$\frac{6}{10} = \frac{3}{5} \times 20$$

$$60 \% \quad 60$$

boxes

Score

8 / 10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$-x - x^2 + x^2$$

$$1 - 2x + x + x$$

$$-2x^2 + x^2$$

- X 1. Solve for x in the equation

$$x(3-k) = 12-k^2$$

$$3(x+4) = k(x-2)$$

$$3x+12 = kx - k^2$$

$$3x - kx = 12 - k^2$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{x+9}{15}$$

5. $\frac{2x+3}{3} - \frac{3x+2}{5} \cdot 3$

$$\frac{10x+15 - 9x-6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$16 \div 25$$

$$4$$

5. Calculate

$$\frac{1}{2} \cdot \frac{4}{12} - \frac{3}{12} \left(16 - \left(\frac{1}{3} - \frac{1}{4} \right)^{-2} \right)$$

$$\frac{20}{15} \text{ or } \frac{4}{3}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 \text{ miles}$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x - 5y = -2$$

$$y = 10 - x$$

$$3x - 5(10 - x) = -2$$

$$3x - 50 + 5x = -2$$

$$8x = 48$$

$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

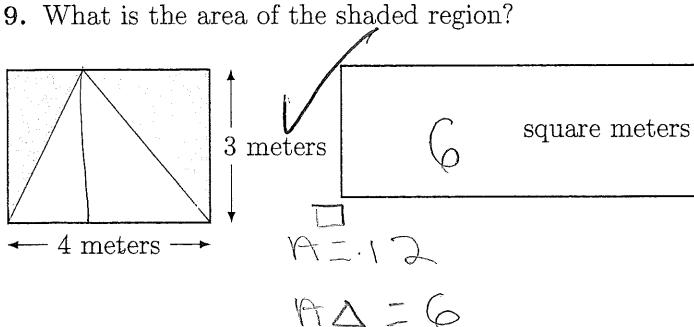
$$3.5 \text{ for } 200$$

$$1 \text{ for } 150$$

$$2 \cdot 5 \text{ for } 100$$

$$\$ 400$$

9. What is the area of the shaded region?



10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

~~$\frac{120,000}{200,000} \times 100\%$~~

$$60\%$$

$$\frac{2}{2} = 60$$

Put your final answers in the

boxes

Abby Sovik
3960226

Score

5 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\frac{3x+12}{(x-2)} = k$$

$$x+4 = \frac{k(x-2)}{3}$$

$$3(x+4) = k(x-2)$$

$$3x+12 = \frac{k(x-2)}{(x-2)}$$

$x =$

2. Multiply out and simplify. Check your answer.

$$\cancel{1-2x+x^2+x} - \cancel{2x^2+x^3} \\ (1+x)(1-2x+x^2)$$

$$1 - x - x^2 + x^3$$

3. Put over a common denominator and simplify.

$$5 \frac{(2x+3)}{3} \frac{3(3x+2)}{5}$$

$$\checkmark \frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \times \frac{12}{1} = \frac{48}{3}$$

$$\frac{15}{3} \quad \frac{17}{3} \quad \frac{16}{3}$$

$$\frac{30}{3} \quad \frac{51}{3} \quad \frac{36}{3}$$

16

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$\left(\frac{16}{1} - \frac{1}{12}\right)$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 50 \\ 3 \\ \hline 90 \\ 1270 \\ - 90 \\ \hline 180 \\ 90 \text{ mi} \quad \frac{60}{3} \\ \hline 180 \end{array}$$

6

hours

7. Solve for x and y

$$x+4=10 \quad 3x-5y=-2$$

$$x+y=10$$

$$x=10-y$$

$$3(10-y) - 5y = -2$$

$$-30 + 3y - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$x = 6$$

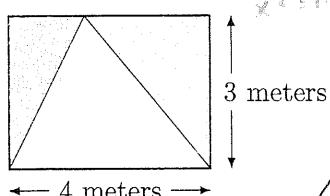
$$y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

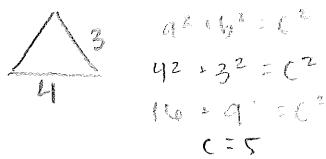
$$\begin{array}{r} \text{Spent} = 700 \\ 700 \quad 200 \\ - 700 \\ \hline 0 \\ \boxed{850} \quad 2.5 \\ \hline 212.5 \\ 300 \end{array}$$

\$ 400

9. What is the area of the shaded region?



square meters



$$3^2 + 4^2 = 5^2$$

$$9 + 16 = 25$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200,000 \\ 80,000 \\ \hline 120,000 \end{array}$$

$$\frac{120}{200} = \frac{6}{10}$$

60 %

boxes

3 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$\begin{aligned} 3x + 12 &= kx - 2k \\ -12 & \quad -12 \\ 3x &= kx - 2k - 12 \\ x &= \frac{kx - 2k - 12}{3x} \end{aligned}$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\begin{aligned} 1 - 2x + x^2 &+ x - 2x^2 + x^3 \\ 1 - 1x + 1x^2 + x^3 & \end{aligned}$$

3. Put over a common denominator and simplify.

$$5 \times \frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 270 \\ 50 \\ \hline 150 \\ 60 \\ \hline 120 \end{array}$$

9 hours

50 mph for 3 hours
60 mph for 6 hours

7. Solve for x and y

$$\begin{aligned} 3x - 5y &= -2 \\ x + y &= 10 \\ 4x - 4y &= 8 \end{aligned}$$

$x =$

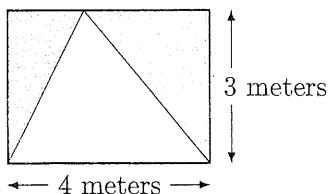
$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} \$100 &\quad 3.5 = \$350 \\ &\quad 1 = \$100 \\ &\quad 2.5 = \$250 \end{aligned}$$

\$ 400

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

Put your final answers in the

| |
|-------|
| boxes |
|-------|

Score

| | | |
|---|---|----|
| 6 | / | 10 |
|---|---|----|

No calculators

provided on this page.

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If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x \leq kx - 2k - 12$$

$$x + kx = -2k - 12$$

$$x = \frac{2k + 12}{3-k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{10x+15 - 9x-6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

| |
|--|
| |
|--|

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 50 \cdot 3 + 60 \cdot x \\ 150 \\ 270 \\ \hline 120 \end{array}$$

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$\begin{array}{l} 3(10-y) - 5y = -2 \\ 30 - 3y - 5y = -2 \\ -8y = -32 \\ y = 4 \end{array}$$

$$\begin{array}{l} 3y - 5(10-x) = -2 \\ 3y - 50 + 5x = -2 \\ 5x = 48 \\ x = 6 \end{array}$$

$$x = 6$$

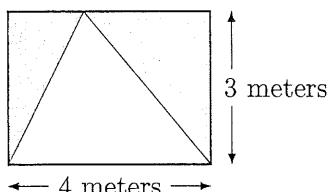
$$y = -4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} 3.5 \text{ ton} - \$200 = 700 \\ 1 \text{ ton} - \$150 = 150 \\ 2.5 \text{ ton} - \$100 = 250 \\ \hline 1000 \end{array}$$

$$\$ 400$$

9. What is the area of the shaded region?



| |
|---------------|
| square meters |
|---------------|

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200000 - 80000}{200000} = \frac{120000}{200000} = \frac{3}{5}$$

| |
|------|
| 60 % |
|------|

No calculators

provided on this page.

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If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation



$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx + 12 = -2k$$

$$x(3-k) + 12 = -2k$$

$$x = \frac{-2k - 12}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\cancel{1-2x+x^2} + \cancel{x^4} - 2x^3 + x^2$$

$$x^3 + x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} \quad \frac{3x+2}{5}$$

$$\frac{10x^2 + 17x + 11}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot \frac{1}{4} = \frac{1}{3}$$

$$\frac{16}{4} = 4$$

$$4 \checkmark$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{\hspace{2cm}}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$50 \cdot 3 + 60x = 270$$

$$150 + 60x = 270$$

$$-150 \quad -150$$

$$\frac{60x}{60} = \frac{120}{60}$$

$$x = 2$$

$$5 \checkmark \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

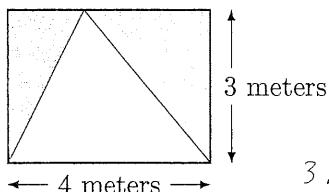
$$x = \boxed{\hspace{1cm}}$$

$$y = \boxed{\hspace{1cm}}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\boxed{\hspace{2cm}}$$

9. What is the area of the shaded region?



$$\frac{1}{2} \cdot 4 \cdot 3 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\boxed{\hspace{2cm}} \quad \checkmark \%$$

*normally in 6pm section; emailed about coming to this one

Math 34A Winter 2021
Entrance Quiz

Put your final answers in the

| |
|-------|
| boxes |
|-------|

Libby Holmes 6546436

No calculators

Score

8 / 10

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$\begin{aligned} 3x + 12 &= kx - 2 \\ 3x - kx &= -2 - 12 \\ 3x - kx &= -14 \end{aligned}$$

| |
|--------------|
| $x = 3k - 6$ |
|--------------|

2. Multiply out and simplify. Check your answer.

$$1 - 2x^2 + x^3$$

$$(1+x)(1-2x+x^2)$$

| |
|---------------------|
| $1 - x - x^2 + x^3$ |
|---------------------|

3. Put over a common

denominator and sim-

$$\begin{aligned} 10x+15 & 9x+6 \\ 5(2x+3) & 3(3x+2) \\ 15 & 15 \quad 5 \end{aligned}$$

| |
|---------------------|
| $\frac{19x+21}{15}$ |
|---------------------|

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \cdot \frac{12}{1} = \frac{48}{3} \cdot \frac{1}{4} = \frac{48}{12} = 4$$

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\begin{aligned} & \left(\frac{1}{12}\right)^{-1} \\ & 16 - 12 \cdot \left(\frac{1}{12}\right)^2 \\ & 16 - 12 \cdot \frac{1}{144} \\ & 16 - \frac{1}{12} \\ & \frac{191}{12} = 15 \frac{11}{12} \end{aligned}$$

| |
|---------------|
| $\frac{5}{4}$ |
|---------------|

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$270 = 150 + 60x$$

$$120 = 60x$$

$$x = 2 \text{ hours} + 3 \text{ hours} = 5$$

hours

5

7. Solve for x and y

$$\begin{aligned} 3x - 5y &= 2 \\ 3x - 20 &= 2 \\ 3x &= 22 \\ x &= 6 \end{aligned}$$

$$\begin{aligned} x + y &= 10 \\ 6 + y &= 10 \\ y &= 4 \end{aligned}$$

$$\begin{aligned} 3(10-y) - 5y &= 2 \\ 30 - 3y - 5y &= 2 \\ 30 - 8y &= 2 \\ 30 - 32 &= 8y \\ -2 &= 8y \\ -\frac{1}{4} &= y \end{aligned}$$

| |
|---------|
| $x = 6$ |
|---------|

| |
|---------|
| $y = 4$ |
|---------|

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 + \$200 = \$700$$

$$1 + \$150 = 250$$

$$3.5 + \$100 = 400$$

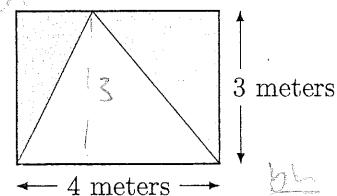
$$2.5 + \$100 = 350$$

$$1 + \$100 = 200$$

$$1 + \$100 = 200$$

\$1400

9. What is the area of the shaded region?



6 square meters

$$\frac{4 \cdot 3}{2} = \frac{12}{2} = 6$$

$$12 - 6 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120}{200} = \frac{60}{100} = 60\%$$

$$\frac{200 \times 4}{10} = \frac{800}{10} = 80\%$$

60 %

Put your final answers in the

Score

No calculators

provided on this page.

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If you score 8-10, congratulations! You are ready for Math 34A.

Francisco Moll

ID: 6222434

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -12 - 2k$$

$$x = \frac{-12 - 2k}{3 - k}$$



2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - 2x + x^2 + x - 2x^2 + x^3$$

$$x^3 - x^2 - x + 1$$

3. Put over a common

denominator and sim-
plify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{12} \cdot 12$$

$$4$$

5. Calculate

$$\frac{20}{\left(\frac{1}{15}\left(\frac{1}{2}\right)\right)^2} = \frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 - 3 \text{ hrs}$$

$$120 - \text{rest}$$

$$\frac{60}{120} = 2$$

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

~~$$-3x + 5y = 10$$~~

$$x = 6$$

$$y = 4$$

$$8x + 4y = -8y - 32$$

$$x = 6 \quad y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$3.5 \cdot 200 = 700$$

$$+ 150$$

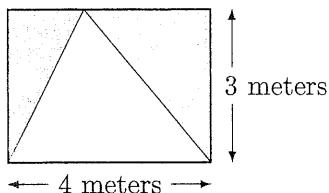
$$\text{Spent: } 700$$

$$+ 250$$

$$1100$$

$$\$ 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{200000 - 80000}{200000} = \frac{120000}{200000} = \frac{3}{5}$$

$$60 \%$$

boxes

Score

8 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$\begin{aligned} 3x+4 &= 9x-2kx \quad 4kx = 8 \\ 2kx-4 & \\ 3(x+4) &= k(x-2) \quad x = 2(3kx) \\ 3x+12 &= kx+2k \\ 3x+12 &= kx+2k \\ 3x+12 &= kx+2k \\ 3x+12 &= kx+2k \end{aligned}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\begin{aligned} 1-2x+x^2 &+ x - 2x^2 + x^3 \\ (1-x-x^2+x^3) & \end{aligned}$$

3. Put over a common denominator and simplify.

$$\frac{x+9}{15}$$

$$\begin{aligned} 5. \quad \frac{(2x+3)(3x+2)}{3} \cdot 3 & \\ \frac{10x+15}{15} - \frac{9x+6}{15} & \end{aligned}$$

5. Calculate

$$\begin{aligned} \left(\frac{4}{12} - \frac{3}{12}\right)^{-2} &= \left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2 \\ 16 - \frac{1}{12} & \end{aligned}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{aligned} 50 \text{ mph for } 3 \text{ hr} \\ 60 \text{ mph for rest} \\ 150 \text{ miles} \\ 2 \times 3 \end{aligned}$$

$$\begin{aligned} 5 \text{ hours} \\ 270 - 150 = \frac{120}{60} \end{aligned}$$

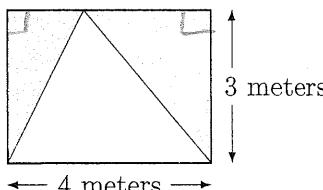
7. Solve for
- x
- and
- y

$$\begin{aligned} 3x-5y &= 2 \\ 3x-20 & \\ 3x-5y &= -2 \\ x \cdot 3 & \quad (x+y=10) \\ 3x-5y &= -2 \\ + (-3x-3y=-30) & \\ -8y = -32 & \quad (y=4) \end{aligned}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} 7 \text{ for } \$100 \text{ per ton} \\ \text{sold for } 200\% \\ 7 - 3.5 = 3.5 \\ 2.5 \cdot 100 = 250 \end{aligned}$$

9. What is the area of the shaded region?



$$16 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} 200,000 \\ - 80,000 \\ 120,000 \end{aligned}$$

$$60\%$$

$$\begin{aligned} 100,000 \\ - 80,000 \\ 20,000 \end{aligned}$$

Put your final answers in the

boxes

Sophia Miceli

5/6/2003

Score

7 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12+2k}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$x^3 - x^2 - x + 1$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3} - \frac{3x+2}{5}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$4$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$463 \quad \frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$5$$

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

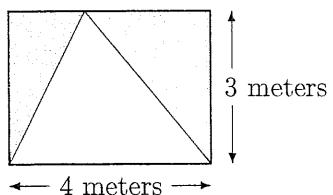
$$x = 6$$

$$y = 4$$

8. An entrepreneur bought 7 tons of apples for ~~\$100 per ton~~. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make? *not total!*

$$\$ 1000$$

9. What is the area of the shaded region?



$$9 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$60 \%$$

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

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If you score 4–7, seek help NOW: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$\cancel{0} \quad \cancel{0} \cancel{5}$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$\cancel{3x} = \cancel{kx} (3k) \cancel{x} - 2k - 12$$

$$x = \frac{12 - 2k}{3 - k}$$

2. Multiply out and simplify. Check your answer.

$$\begin{aligned} & 1 - 2x + x^2 + x - 2x + x^2 \\ & 1 - 2x + x^2 + x + x(1 - 2x + x^2) \\ & 1 - 3x + x^2 + x^3 \end{aligned}$$

$$1 - 3x + x^2 + x^3$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+15-9x-6}{15}$$

$$\frac{x+9}{15}$$

$$\frac{2x+3}{3} \quad \frac{3x+2}{5}$$

$$\frac{5}{3} \cdot \frac{2x+3}{3} = \frac{5}{3} \cdot \frac{3x+2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\cancel{0}$$

$$\boxed{\hspace{2cm}}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\frac{20}{16}$$

$$\frac{20}{(16 - 12)^2} = \frac{20}{4^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\cancel{0}$$

$$\text{hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = \cancel{8}$$

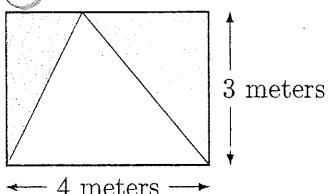
$$y = \cancel{4}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$$$

$$\boxed{\hspace{2cm}}$$

9. What is the area of the shaded region?



square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\%$$

$$\boxed{\hspace{2cm}}$$

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

1. Solve for
- x
- in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{12 - 2k}{k - 3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\begin{array}{r} 1 \\ 1 \\ -2x \\ \hline x^2 \end{array}$$

$$x^3 + 2x$$

3. Put over a common denominator and simplify.

$$\frac{2x+3}{3 \cdot 5} - \frac{3x+2}{5 \cdot 3} = \frac{15}{15}$$

$$\frac{-x-1}{15}$$

4. What is 25% of
- $\frac{4}{3}$
- of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\boxed{\hspace{2cm}}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{l} 50 \text{ mph} \\ 60 \text{ mph} \\ 3 \text{ hrs} \rightarrow = 270 \text{ mi} \\ 1.2 \text{ hrs} \end{array}$$

hours

7. Solve for
- x
- and
- y

$$3x - 5y = -2$$

$$x + y = 10$$

$$2x - 4y = 8$$

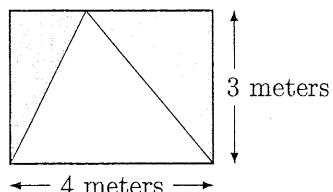
$$x = \boxed{\hspace{1cm}}$$

$$y = \boxed{\hspace{1cm}}$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\$ 450$$

9. What is the area of the shaded region?



$$\text{square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 200,000 \\ - 80,000 \\ \hline 120,000 \end{array}$$

$$78\%$$

Put your final answers in the

boxes

Anthony Hernandez
6240295

Score

6 / 10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

- X 1. Solve for x in the equation

$$\frac{12+2k}{x-3}$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2k$$

$$3x - kx = -2k - 12$$

$$x = \frac{-k - 12k}{2}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$1 - x + x^2 + x - 2x^2 + x^3$$

3. Put over a common

denominator and sim-
plify.

$$\frac{10x+15}{15} - \frac{9x+6}{15}$$

$$\frac{x+9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{1}{3} \text{ of } 12 = 4$$

$$\frac{4}{3} \text{ of } 4 = 16$$

$$25\% \text{ of } 16 = 4$$

4

5. Calculate

$$\frac{4}{12} - \frac{3}{12}$$

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2} = \frac{1}{25}$$

$$16 - \left(\frac{1}{12}\right)^{-1}$$

$$212.6$$

$$\frac{20}{256}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{aligned} & 150 \text{ miles} \\ & 270 - 150 = 120 \\ & 120 \div 60 = 2 \text{ hrs} \end{aligned}$$

5 hrs hours

7. Solve for x and y

$$x = 6$$

$$3x - 5y = -2$$

$$y = 4$$

$$x + y = 10$$

$$3(10-y) - 5y = -2$$

$$30 - 3y - 5y = -2$$

$$\frac{30}{8} - 8y = -2$$

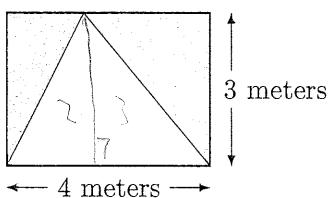
$$x+y=10$$

$$x+y=10$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} & 6700 \text{ tons} \\ & 3.5 \times 200 = \$700 \\ & 3.5 \times 150 = \$525 \\ & 1 \times 100 = \$100 \\ & \$700 + \$525 + \$100 = \$1325 \end{aligned}$$

9. What is the area of the shaded region?



$$7 \text{ m}^2 \text{ square meters}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

60 %

3240312

boxes

Score

4 / 10

No calculators

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

AUETHIA 8888877

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2$$

$$3x + 14 = kx - 3x - 7 \quad \cancel{14} \div (k-3)$$

$$x = \frac{14}{k-3}$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\begin{array}{r} -2x \quad x^2 \\ \times \quad 1 \quad -2x \quad x^2 \\ \hline x \quad -2x^2 \quad x^3 \end{array}$$

$$x^3 - x^2 - x + 1$$

$$x^3 + x^2 - 2x^2 - 2x + x + 1$$

3. Put over a common denominator and simplify.

$$5. \frac{2x+3}{3} - \frac{3x+2}{5} \cdot 3 = \frac{10x+15}{15} - \frac{9x+6}{15}$$

$$\frac{5x+15 - 9x - 6}{15} = \frac{-4x + 9}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{1}{3} \cdot \frac{1}{4} \cdot \frac{1}{3} = \frac{1}{36}$$

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2} = \frac{20}{10}$$

$$\begin{array}{r} 16 \cancel{1} \cancel{2} \\ \overline{16} \cancel{1} \cancel{2} \\ 16 \cancel{1} \cancel{2} \\ \overline{16} \cancel{1} \cancel{2} \\ 16 \cancel{1} \cancel{2} \\ \overline{16} \cancel{1} \cancel{2} \\ 16 \cancel{1} \cancel{2} \\ \overline{16} \cancel{1} \cancel{2} \end{array}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 50 \\ 50 > 150 \\ 3 \cdot 50 \\ 150 \\ 4 \cdot 60 > 120 \\ 5 \cdot 60 = 300 \\ 6 \cdot 60 = 360 \\ 7 \cdot 60 = 420 \end{array}$$

$$5 \text{ hours}$$

7. Solve for x and y

$$18 - 2x = 2$$

$$3x - 5y = -2$$

$$x = 6$$

$$x + y = 10$$

$$y = 4$$

$$x + y = 10 - y \quad 3x - 5y = -2$$

$$x = 10 - y \quad 3(10 - y) - 5y = -2$$

$$30 - 3y - 5y = -2 \quad -30$$

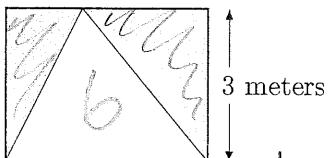
$$-8y = -32 \quad y = 4$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{array}{r} \$700 \\ \$700 \quad 350 \quad 450 \\ 570 \quad 600 \quad 700 \\ 600 + 200 = 800 \\ 600 + 150 = 750 \\ 800 + 750 = 1550 \end{array}$$

$$\begin{array}{r} \$700 \\ \$700 \quad 200 \quad 150 \\ 500 \quad 450 \quad 300 \\ 500 + 450 = 950 \\ 950 + 300 = 1250 \end{array}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\begin{array}{l} \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \\ \text{Area} = \frac{1}{2} \times 4 \times 3 = \frac{1}{2} \times 12 = 6 \end{array}$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{array}{r} 100,000 : 50\% \\ 200,000 \\ 3 \\ \text{LESS THAN } 50\% \end{array}$$

$$\begin{array}{r} 25\% \\ 25\% \end{array}$$

$$\begin{array}{r} 200,000 : 80,000 = 20 \\ 20 \times 2.5 = 25\% \end{array}$$

boxes

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

ID: 6541570

1. Solve for x in the equation

$$(3x - kx) = \frac{(-2k - 12)}{-2}$$

$$3(x + 4) = k(x - 2)$$

$$\begin{array}{r} 3x + 12 \\ - kx - 12 \\ \hline 3x - kx \end{array}$$

$$(3x - kx) = (-2k - 12)$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2) = \frac{(1 - 2x + x^2)(x - 2x^2 + x^3)}{x}$$

$$\boxed{(1 - 3x)(x^2 + x^3)}$$

3. Put over a common

denominator and sim-
plify.

$$\left(\frac{2x+3}{3} \right)^5 \left(\frac{3x+2}{5} \right)^3$$

$$\frac{x+3}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{16} \cdot 3 \frac{4}{12} \cdot \frac{4}{3} = 16$$

$$\boxed{4}$$

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4} \right)^{-1} \right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{r} 3 \quad 2 \\ 50 \text{ mi} \quad 60 \text{ mi} \\ \hline 150 \text{ mi} \end{array} \quad \begin{array}{r} 2 \\ 60 \text{ mi} \\ \hline 30 \text{ mi} \\ \hline 180 \text{ mi} \end{array} \quad \boxed{5} \text{ hours}$$

7. Solve for x and y

$$x = 6$$

$$3x - 5y = -2$$

$$(x + 4 = 10)^{-3}$$

$$\begin{array}{r} 3x - 5y = -2 \\ -3x + 3y = +30 \\ \hline 8y = -32 \end{array}$$

$$\frac{8y}{8} = \frac{-32}{8} \quad | \quad y = 4$$

$$y = 4$$

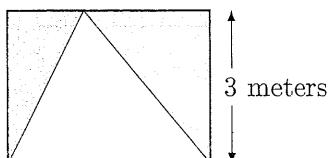
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$-\cancel{700} + \cancel{700} + 150 +$$

$$\begin{array}{r} 250 \\ 150 \\ \hline 400 \end{array}$$

$$\boxed{\$400}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$A_{\Delta} = \frac{1}{2}bh \quad \frac{1}{2}(4)(3) = 6$$

$$\frac{80,000}{200,000} = \boxed{40\%}$$

$$\frac{8}{20} = \frac{2}{5} \quad \frac{2}{5} = \boxed{40\%}$$

$$\boxed{60\%} \checkmark$$

boxes

9 / 10

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Joseph Armstrong
5/21/26/3

1. Solve for x in the equation $k(3-k) = -14$

$$3x - kx = -14$$

$$k(3-k) = -14 \quad | :k$$

$$3(x+4) = k(x-2)$$

$$3x + 12 = kx - 2$$

$$3x + 12 = kx - 12$$

$$x = \frac{-12 + 2k}{3 + k} \quad (k \neq -3)$$

$$3x + 12 = kx - 12 \quad 3x + kx = -12 - 12$$

2. Multiply out and simplify. Check your answer.

$$(-x+x^2+x-2x+x^3)(1+x)(1-2x+x^2)$$

$$(-x-x^2)x^3$$

3. Put over a common denominator and simplify.

$\frac{9x+15}{15}$

$$x + 9 \quad / 15$$

$$\frac{2x+3}{3} - \frac{3x+2}{5} = \frac{9x+15}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{12}{1} \cdot \frac{4}{3} = 98 \frac{1}{3} \quad \frac{1}{4} = \frac{48}{12}$$

4

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

$$\left(\frac{4}{12} - \frac{3}{12}\right)^{-1} = \left(\frac{1}{12}\right)^{-1}$$

$$\frac{20}{16} = \frac{10}{8} = \frac{5}{4} \quad \frac{20}{(16-12)^2} = \frac{20}{16} = \frac{5}{4}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$\begin{array}{l} 1 \text{ } 50 \\ 2 \text{ } 100 \\ 3 \text{ } 150 \\ 4 \text{ } 210 \\ 5 \text{ } 270 \end{array}$$

5

hours

7. Solve for x and y

$$3x - 2y = -2$$

$$3x - 5y = -2$$

$$x + y = 10$$

$$x = 10 - y$$

$$3(10-y) - 5y = -2$$

$$x = 6$$

$$y = 4$$

$$30 - 8y = -2 \quad 30 - 8(4) = -2 \quad 30 - 32 = -2$$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

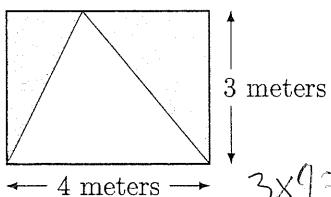
$$3.5 \text{ tons for } 200 = 350$$

$$1 \text{ ton for } 150 = 150$$

$$2.5 \text{ tons for } 100 = 250$$

$$\$ \quad 400$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$3 \times 4 = 12$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\frac{120}{200} = \frac{12}{20} = \frac{6}{10}$$

$$60 \quad \% \quad 60\%$$

Put your final answers in the

boxes

Score

10

No calculators

provided on this page.

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If you score under 4 on this test, you should consider dropping the class.

If you score 4-7, seek help NOW: maybe enroll in CLAS?

If you score 8-10, congratulations! You are ready for Math 34A.

Dominique Chang Lee

1. Solve for x in the equation

$$3(x+4) = k(x-2)$$

$$x = \frac{k-2}{3} - 4$$

$$x = \frac{k-2}{3} - 4$$

2. Multiply out and simplify. Check your answer.

$$(1+x)(1-2x+x^2)$$

$$\begin{array}{r} 1-2x+x^2 \\ \times x \\ \hline 1-2x+x^2 \end{array}$$

$$1-x-x^2+x^3$$

3. Put over a common

denominator and sim-
plify.

$$\frac{x+9}{15}$$

$$\frac{10x+10}{15} - \frac{2x+3}{3} - \frac{3x+2}{5} = \frac{4x+6}{15}$$

4. What is 25% of $\frac{4}{3}$ of 12?

$$\frac{4}{3} \times \frac{12}{1} \times \frac{3}{4} = 12$$

$$12.5\%$$

5. Calculate

$$\frac{20}{(16 - (\frac{1}{3} - \frac{1}{4})^{-1})^2}$$

$$\frac{316}{256}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

$$150 + 120 = 270$$

$$5 \text{ hours}$$

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

$$3x - 5y = -2$$

$$x = 6$$

$$y = 4$$

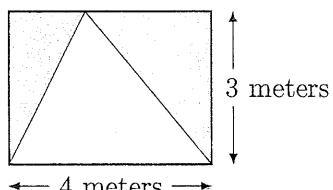
8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

$$\begin{aligned} &7 \times 100 = 700 \\ &\frac{700}{2} = 350 \\ &350 \times 200 = 70000 \\ &150 = 150 \\ &70000 - 150 = 69850 \end{aligned}$$

$$\$1000$$

$$\begin{array}{r} 200 \\ \times 300 \\ \hline 600 \\ + 600 \\ \hline 1000 \end{array}$$

9. What is the area of the shaded region?



$$6 \text{ square meters}$$

$$\frac{1}{2} \times 4 \times 3 = 6$$

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

$$\begin{aligned} &200,000 \\ &\times 80,000 \\ &\hline 160,000 \end{aligned}$$

$$160,000$$

%